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A review of the genus *Cordilura* Fallén, 1810 (Diptera: Scathophagidae) of Russia

Обзор видов рода *Cordilura* Fallén, 1810 (Diptera: Scathophagidae) фауны России

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KEYWORDS: Diptera, Scathophagidae, dung flies, *Cordilura*, Russia, review, new species, new records.

КЛЮЧЕВЫЕ СЛОВА: Diptera, Scathophagidae, *Cordilura*, Russia, новый вид, новые данные по распространению.

ABSTRACT. Flies of the genus *Cordilura* Fallén, 1810 of Russia, which includes 38 species, are reviewed. Generic and species descriptions and key for determination of species are given, and data on distributions are summarized. One species, *Cordilura nubilosa* **sp.n.**, is described as new to science. New records of the following species are given: *Cordilura albilabris* Fabricius, 1805 (Armenia, Kazakhstan, Kyrgyzstan); *C. albipes* Fallén, 1819 (Armenia, Belarus, Georgia); *C. impudica* Rondani, 1867 (Uzbekistan); *C. pudica* Meigen, 1826 (Belarus); *C. rufipes* Meigen, 1826 (Georgia, Kazakhstan).

РЕЗЮМЕ. Дан обзор двукрылых рода *Cordilura* Fallén, 1810 фауны России, включающего 38 видов. Приведены диагноз рода, описания видов и ключ для определения видов рода *Cordilura* России, а также суммированы данные по распространению видов рода на территории России. Описан один новый для науки вид, *Cordilura nubilosa* **sp.n.** Приведены новые данные о распространении следующих видов: *Cordilura albilabris* Fabricius, 1805 (Армения, Казахстан, Киргизия); *C. albipes* Fallén, 1819 (Армения, Белоруссия, Грузия); *Cordilura impudica* Rondani, 1867 (Узбекистан); *C. pudica* Meigen, 1826 (Белоруссия); *C. rufipes* Meigen, 1826 (Грузия, Казахстан).

Introduction

Cordilura Fallén, 1810 is the largest genus within the family Scathophagidae and consists of 91 species distributed in the Northern Hemisphere: 46 species are known in Palaearctic [Iwasa, 2020] and 36 in Nearctic [Vockeroth, 1965, 1987], with 7 species with Holarctic distribution; 2 species are recorded in Oriental Region [Ozerov, Krivosheina, 2012a; 2013].

The fauna of Russia includes 37 species [Loew, 1864; Becker, 1894; Hackman, 1956; Gorodkov, 1970, 1974, 1986; Elberg, 1972; Ozerov, 2007b, 2009; Šifner, 2008; Ozerov, Krivosheina, 2012b, 2015, 2017].

Faunistic reviews of some districts of Russia are published for the Kamchatka [Hendel, 1930; Ozerov, 2007a], Volga Region [Ovchinnikov, 2004], Karelia [Humala, Polevoi, 2009], Yakutia [Bagachanova *et al.*, 2016] and Russian Far East [Ozerov, Krivosheina, 2014], but no general work has been fulfilled.

Almost all species of *Cordilura* whose habits are known are primary borers in culms of *Carex* and *Scirpus* spp. (Cyperaceae) [Neff, Wallace, 1969; Wallace, Neff, 1971]. Besides, larvae of *Cordilura* have been found in stems of *Glyceria* (Gramineae) and *Juncus* (Juncaceae) [Ferrar, 1987].

Adults of *Cordilura* species are often collected at locations where these plants grow: in marshy plots, at

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Figs 1–2. Male of *Cordilura rufipes* (Meigen) (1) and female of *Cordilura picipes* (Meigen) (2). Photographs by D.I. Gavryushin.
Рис. 1–2. Самец *Cordilura rufipes* (Meigen) (1) и самка *Cordilura picipes* (Meigen) (2). Фото Д.И. Гаврюшина.

banks of lakes covered with Carex spp., along spring banks and in other mesophytic habitats.

Life cycles, mature larvae, and puparia of 13 Nearctic species of *Cordilura* are described [Neff, Wallace, 1969; Wallace, Neff, 1971]. Also 3rd stage larva and pupa of Holarctic species *Cordilura pudica* Meigen, 1826 is described [Wallace, Neff, 1971].

Material and methods

The specimens examined for this study are deposited in the Zoological Museum, Moscow State University, Russia (ZMUM) and Zoological Institute of Russian Academy of Sciences, St. Petersburg, Russia (ZISP). We also studied some material from the Institute of Systematics and Ecology of Animals, Russian Academy of Sciences, Siberian Branch, Novosibirsk, Russia (ISEA) and from Institute of Biology and Soil Sciences, Russian Academy of Sciences, Far Eastern Branch, Vladivostok, Russia (IBSS).

The majority of original Russian geographical names are given in transliteration, but names of some large geographical regions (e.g. Altai (=Altai Krai + Altai Republic), Krasnoyarsk Krai, Primorsky Krai, Sakha Republic (=Yakutia), Zabaykalsky Krai) follow these indicated in Google Earth software.

The data on distributions are cited as follows: Russia is in the first place, other countries of the world are given after a m-dash [—]. More detailed data on the distributions of species in Europe may be found in the work by Šifner [2008], and in North America in the work by Vockeroth [1965].

The terminology used in the generic and species descriptions follows McAlpine [1981]), Cumming & Wood [2009], and Stuckenberg [1999].

Taxonomic results

Cordilura Fallén, 1810

Cordilura Fallén, 1810: 15. Gender: feminine. Type-species: *Musca pubera* Linnaeus, 1758 sensu Fallén, 1810 [misidentification, = *Cordylura rufipes* Meigen, 1826], by monotypy.

Phrosia Robineau-Desvoidy, 1830: 668. Gender: feminine. Type-species: *Phrosia scirpi* Robineau-Desvoidy, 1830, by monotypy [= *Ocyptera albilabris* Fabricius, 1805).

Mosina Robineau-Desvoidy, 1830: 670. Gender: feminine. Type-species: *Musca pubera* Linnaeus, 1758, by designation of Westwood, 1840.

Scoliaphleps Becker, 1894: 98. Gender: feminine. Type-species: *Cordylura ustulata* Zetterstedt, 1838, by original designation.

Cordilurina James, 1955: 96 [as subgenus of *Cordilura*]. Gender: feminine. Type-species: *Cordylura vittipes* Loew, by original designation [= *Cordylura fuscipes* Zetterstedt, 1838].

Cordylura: unjustified emend.

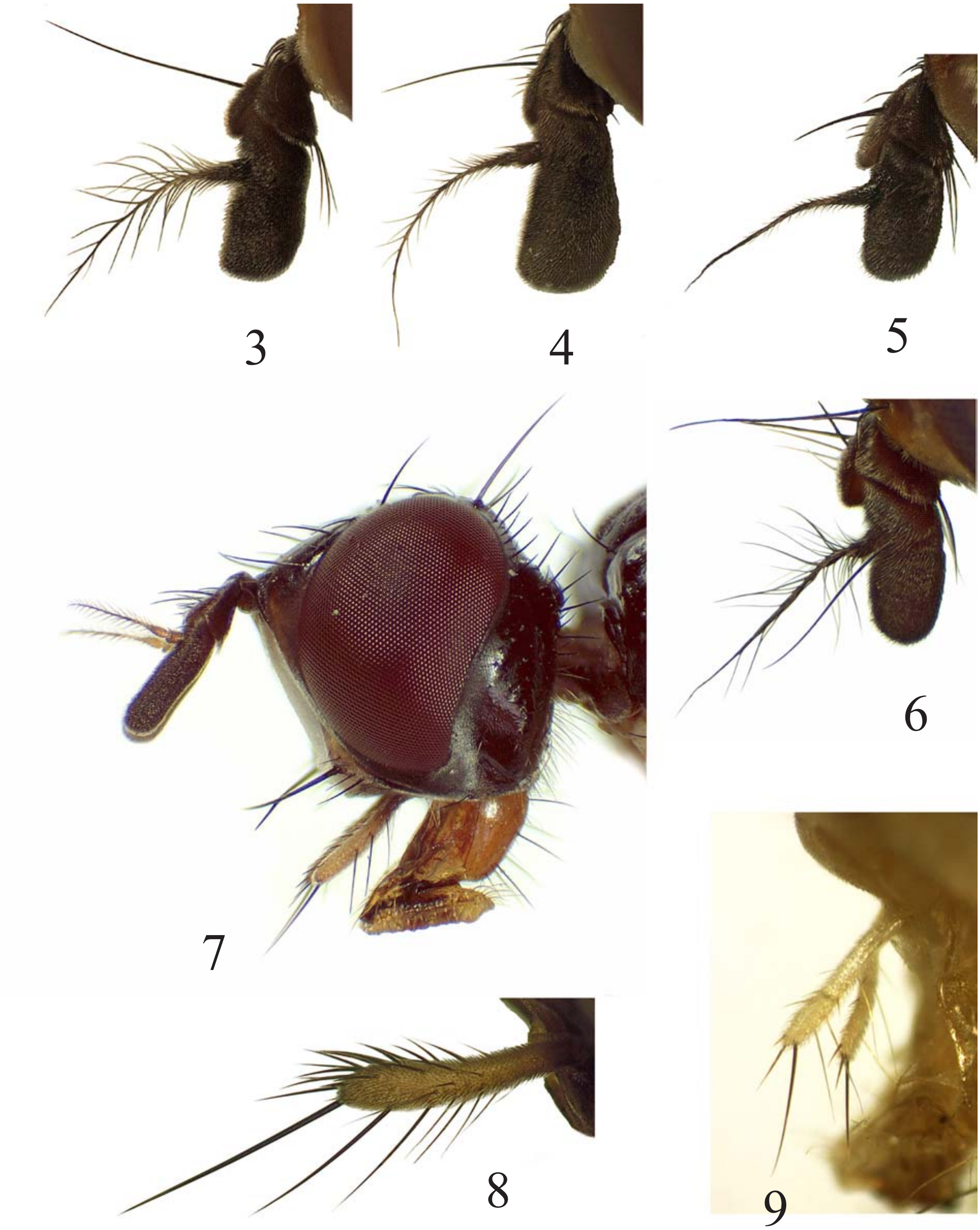
Adult *Cordilura* can be distinguished from the other genera of Scathophagidae by the following combination of characters: 1) katepisternum with one stong seta in posterodorsal corner, 2) palpus with strong apical (subapical) seta about as long as or longer than palpus, 3) fore femur and fore tibia without ventral rows of long spinous setae, 4) proepisternum is covered with hairs at middle or on anterior part.

Cordilura species are slender, small to medium-sized flies (about 3.5–10.5 mm long); color various, but usually is black (Figs 1, 2).

Head subspherical (Fig. 7). Eyes moderately large, dichoptic in both sexes. Frontal vitta and fronto-orbital plate distinct. 1–3 orbitals, 2–5 frontals, 1 ocellar, 1 inner vertical, 1 outer vertical, 1 small postocellar setae present; 1 pair of strong vibrissae and 1–2 pairs of subvibrissae present. Postpedicel rounded apically, 1.5–3 times as long as wide, with arista nearly bare to plumose (Figs 3–7). Palpus slender, slightly broadened towards apex, with a long outstanding seta apically (Figs 8, 9).

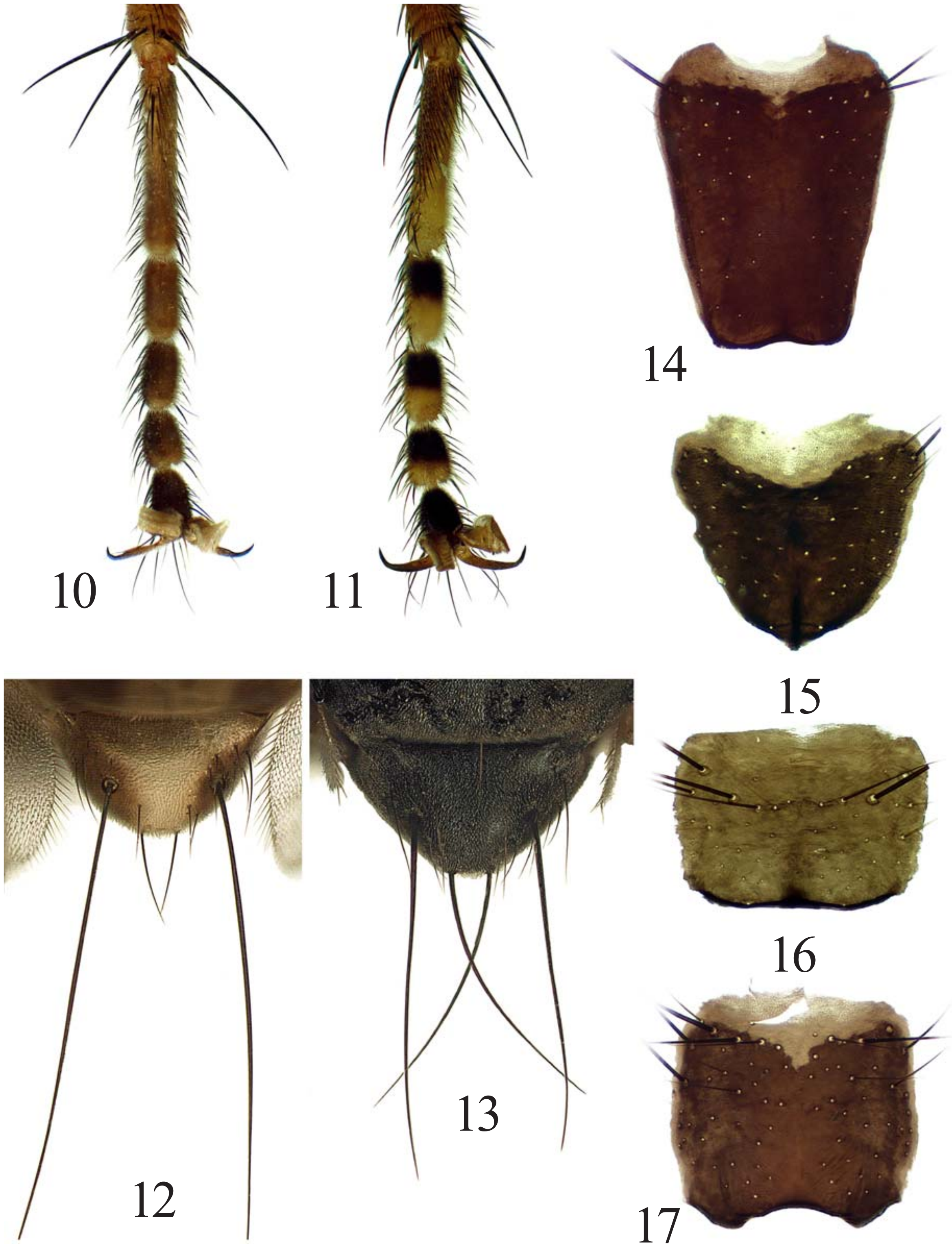
Thorax as in most Calyptrata. Scutum with following setae: acrostichal usually setulose in two rows or absent, dorsocentrals 3+3 (including scapular seta), intra-alars (0–1)+(0–2), supra-alars (0–1)+(1–2), postpronotals 1–2, 2 notopleurals, 2 postalars. Proepisternum covered with fine hairs and usually with 1–2 setae near ventral margin. Proepimeron with 0–1 seta ventral to spiracle. Anepisternum with fine hairs in posterior half and 2–4 well-developed setae near posterior margin. Katepisternum with one long black seta in posterodorsal corner, ventrally and posteriorly with hairs. Anepimeron bare. Postmetacoxal bridge absent. Scutellum with one or two pairs of strong setae: with a pair of strong discal and a pair of strong apical setae (Fig. 13) or with a pair of strong discal setae and pair of apical setulae (Fig. 12).

Legs long and slender. Fore femur with a row of anterodorsal setae, with a row of thin and usually long ventral setae, sometimes with fine long hairs on posterior and posteroventral surfaces. Fore tibia with 1–2 dorsal/posterodorsal, 0–2 posterior, 0–2 anterodorsal, 2 posteroventral setae, and with a ring of apical setae. Mid femur usually with rows of anterior and anterodorsal setae and with 0–1 anterior apical, 0–2 posterior apical and 0–1 posterodorsal apical setae. Mid tibia with 1–3 anterodorsal, 1–2 posterodorsal, 1–2 anteroventral, 0–2 posterior or posteroventral setae, and with a ring of apicals. Hind femur with a row of anterodorsal and several anteroventral setae, 0–2 dorsal setae in apical half, and 0–2 posterior apical setae. Hind tibia with 2–3 anterodorsal, 2–4 posterodorsal, 0–2 anterior or anteroventral, 1 dorsal preapical, 1 anterodorsal preapical, 1 posterodorsal preapical, 1 anteroventral apical, 0–1 posteroventral apical and 0–1 ventral apical setae. Vockeroth [1987: 1090] considers species that lack posteroventral apical seta of hind tibia in the separate genus *Bucephalina* Malloch, 1919. We found another difference between *Bucephalina* and *Cordilura* in the structure of ovipositor (see below). Nevertheless we consider in this work all Russian species hind tibia of which lack posteroventral apical seta (*C. amurensis* Ozerov, 2007, *C. krocha* Ozerov, 2007, *C. nartshukae* Ozerov et Krivosheina, 2015, *C. nubilosa* sp.n., *C. sifneri* Ozerov, 2007, *C. tartariana* Ozerov, 2007) in the genus *Cordilura*. Molecular analysis based on DNA sequences for these genera may solve this issue in future.



Figs 3–9. *Cordilura* spp.: 3 — antenna of *C. rufipes* (Meigen), lateral view; 4 — same of *C. aemula* (Collin); 5 — same of *C. ustulata* (Zetterstedt); 6 — same of *C. ciliata* (Meigen); 7 — head of *C. albilabris* (Fabricius), lateral view; 8 — palpus of *C.remmi* (Elberg); 16 — same of *C. sifneri* Ozerov.

Рис. 3–9. *Cordilura* spp.: 3 — усик *C. rufipes* (Meigen), сбоку; 4 — то же у *C. aemula* (Collin); 5 — то же у *C. ustulata* (Zetterstedt); 6 — то же у *C. ciliata* (Meigen); 7 — голова *C. albilabris* (Fabricius), сбоку; 8 — щупик *C.remmi* (Elberg); 16 — то же у *C. sifneri* Ozerov.

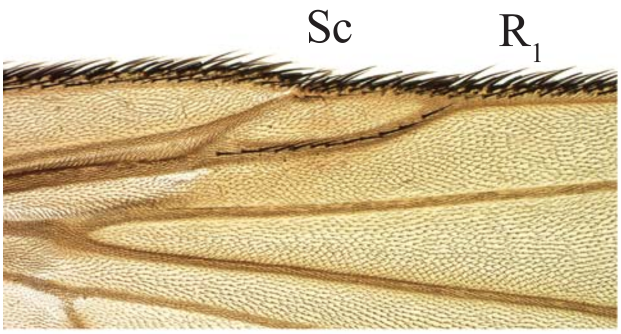


Figs 10–17. *Cordilura* spp.: 10 — fore tarsus of *C. monochroma* Ozerov et Krivosheina, ventral view; 11 — fore tarsus of *C. rufipes* (Meigen), ventral view; 12 — scutellum of *C. albipes* (Fallén), dorsally; 13 — scutellum of *C. pudica* (Meigen), dorsally; 14 — male sternite 4 of *C. rufipes* (Meigen); 15 — male sternite 4 of *C. zaitzevi* Gorodkov; 16 — male sternite 4 of *C. proboscidea* (Zetterstedt); 17 — male sternite 4 of *C.rufimana* (Meigen). 10, 11 — after Ozerov & Krivosheina, 2014, figs 14, 17.

Рис. 10–17. *Cordilura* spp.: 10 — лапка передней ноги *C. monochroma* Ozerov et Krivosheina, снизу; 11 — лапка передней ноги *C. rufipes* (Meigen), снизу; 12 — щиток *C. albipes* (Fallén), сверху; 13 — щиток *C. pudica* (Meigen), сверху; 14 — стернит 4 самца *C. rufipes* (Meigen); 15 — стернит 4 самца *C. zaitzevi* Gorodkov; 16 — стернит 4 самца *C. proboscidea* (Zetterstedt); 17 — стернит 4 самца *C.rufimana* (Meigen). 10, 11 — по Ozerov & Krivosheina, 2014, figs 14, 17.



18





19 20

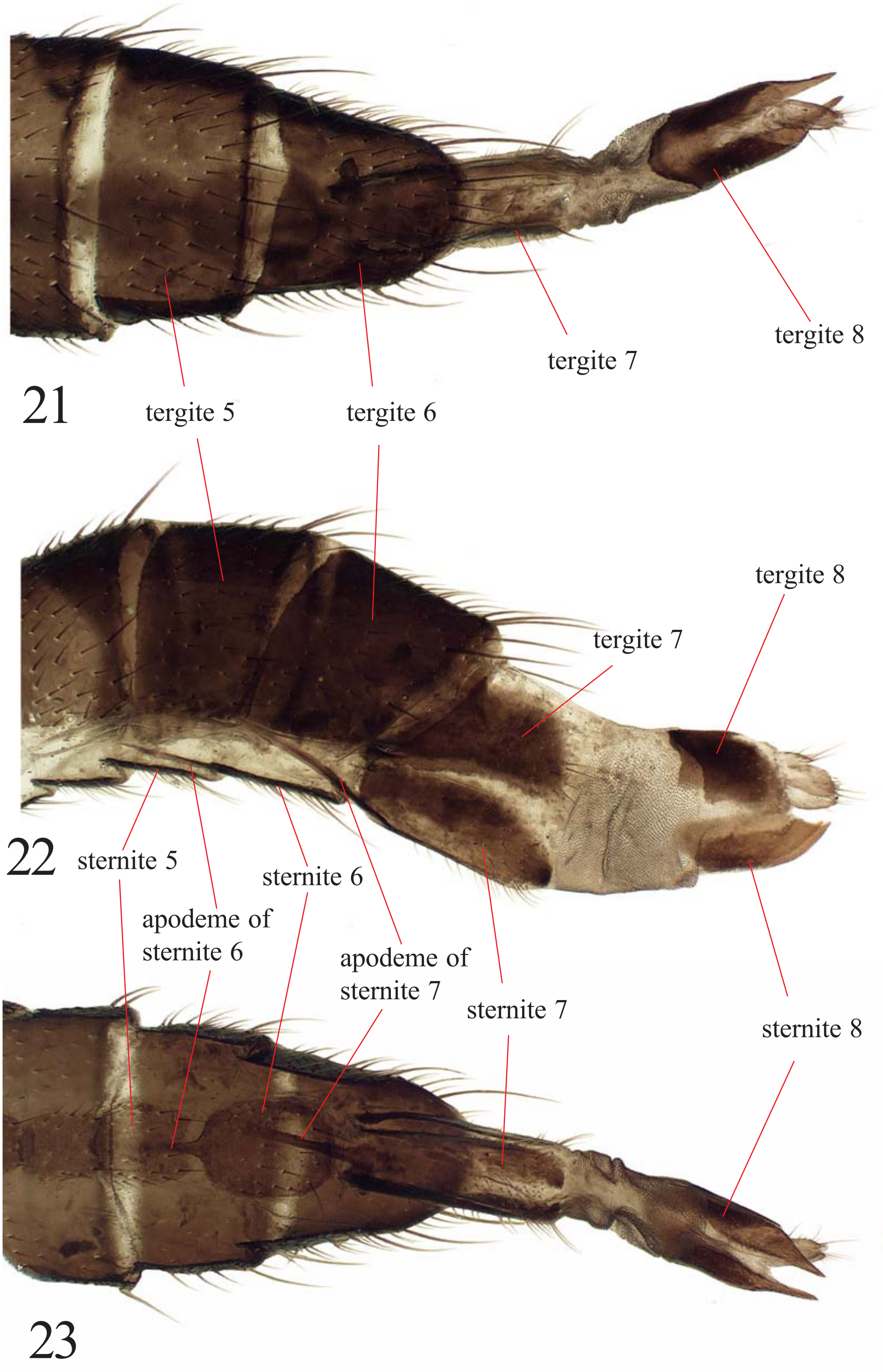
Figs 18–20. Wing of *Cordilura* spp.: 18 — *C. nartshukae* Ozerov et Krivosheina; 19 — *C. impudica* (Rondani), fragment; 20 — *C. shatalkini* Ozerov, apical part. 18 — after Ozerov & Krivosheina, 2015, fig. 1.

Рис. 18–20. Крыло *Cordilura* spp.: 18 — *C. nartshukae* Ozerov et Krivosheina; 19 — *C. impudica* (Rondani), фрагмент; 20 — *C. shatalkini* Ozerov, апикальная часть. 18 — по Ozerov & Krivosheina, 2015, fig. 1.

Wing well-developed, clear or tinged with brownish, rarely darkened apically (Fig. 20), rare with dark spots (Fig. 18). Vein R_1 setulose on apical third of dorsal surface (Fig. 19) or bare.

Abdomen long, subcylindrical. Usually syntergite 1+2 with 2–3 lateral discal and 2–4 lateral marginal setae; tergites 3–6 each with a row of marginal setae. Male sternite 4 triangular, rectangular or trapezoid, as wide as long or wider than long (Figs 14–17). Sternite 5 with well developed lateral lobes from narrow (*e.g.*, Figs 66, 93) to wide (*e.g.*, Figs 72, 131). Surstyli symmetrical, simple (*e.g.*, Figs 37, 102) or bifurcate (*e.g.*, Figs 25, 58); cerci fused apically or medially forming epicercal plate.

Ovipositor (Figs 21–23) long and compressed, with large membranous areas between segments. Tergite 7 sclerotized laterally and membranous dorsally. Sternite 6 well sclerotized, with apodeme of various lenght basally fused to sternite (Figs 22, 23) or without apodeme in most species. Sternite 7 poorly sclerotized medially, with long apodeme not fused to sternite 7. In species *C. krocha*, *C. nartshukae*, *C. amurensis*, *C. sifneri*, *C. tartariana* sternite 7 without apodeme. Tergite 8 in form of heavily sclerotized sclerite with deep membranous dorsal emargination in distal part. Sternite 8 divided medially into 2 small, heavily sclerotized spatulate sclerites. Proctiger situated distally and represented by small entire epiproct, 1 pair of small cerci, and hypoproct.



Figs 21–23. *Cordilura albipes* (Fallén): 21 — end of female abdomen, dorsal view; 22 — same, lateral view; 23 — same, ventral view.
Рис 21–23. *Cordilura albipes* (Fallén): 21 — конец брюшка самки, сверху; 22 — то же, сбоку; 23 — то же, снизу.

Cordilura aberrans (Becker, 1894)
Figs 24–26.

aberrans Becker, 1894: 91 (*Cordylura*). Type-locality: "Lapponia" (Sweden).

rubifrontata Becker, 1894: 91 (*Cordylura*). Type-locality: "Kultuk" (Russia, Baikal Area).

REMARK. This species was recorded in Russia for European part (Kola Peninsula, Bashkiria) by Gorodkov [1970: 446], for Siberia [Becker, 1894: 91 (as *C. rubifrontata*); Gorodkov, 1970: 446, 1986: 14 (without indicating specific locality)], for Far East (including Khabarovsk Krai and Magadan Oblast) [Ozerov, Krivosheina, 2014: 206] and for Yakutia [Bagachanova *et al.*, 2016: 778].

MATERIAL EXAMINED. **Altai**: Artybash env. (51.796ºN 87.265ºE), 16–18.VII.2006, Nartshuk (1 ♂, ZISP); Cherga, 463 m, (51.57ºN 85.56ºE), 28.VI.2009, A. Barkalov, V. Sorokina (1 ♂, 1 ♀, ISEA); Shebalino, floodplain of the River Sema, 462 m, (51.57ºN, 85.58ºE), 27–30.VI.2009, V. Sorokina (2 ♂♂, ISEA); Onguday env., (50.77ºN 86.09ºE), 8–13.VII.2016, N. Vikhrev (3 ♂♂, ZMUM); Seminsky Pass, River Sarlyk (51.11ºN 85.60ºE), 1200 m, 28–30.VI.2016, N. Vikhrev (8 ♂♂, 1 ♀, ZMUM); Seminsky Pass, River Turala (50.99ºN 85.68ºE), 1350 m, 8–12.VII.2016, N. Vikhrev (1 ♂, ZMUM); 10 km E of Cheke-Taman Pass, River Bol'shoy Il'gumen' (50.613ºN 86.469ºE), 28.VII.2006, A. Ovchinnikov (2 ♂♂, 4 ♀♀, ZISP); Turochak env. (52.261ºN 87.123ºE), 17.VII.2006, A. Ovchinnikov (1 ♂, ZISP); **Amur Oblast**: Komsomol'sk-na-Amure, Silinskiy park (50.573ºN 137.039ºE), 29.V.1985, Mutin (1 ♀, IBSS); Zeya Town (53.748ºN 127.261ºE), 12.VII.1982, A. Ozerov (1 ♂, 10 ♀♀, ZMUM); Skovorodino (53.986ºN 123.943ºE), 1–6.VII.1929, Kuznetsov (1 ♂, ZISP); 52 km N of Zeya Town (54.087ºN, 126.871ºE), 1.VII.1982, V. Zlobin (1 ♂, ZISP); **Arkhangelsk Oblast**: Nenetsky Nature Reserve, cordon "Bol'shoy Gusinets" (68.175ºN 53.645ºE), 9.VII.2008, A.L. Ozerov (1 ♂, ZMUM); Vas'kovo (64.413ºN 40.457ºE), 8.VII.1996, Gorodkov (1 ♀, ZISP); **Bashkiria**: E of Kryktytau (53.525ºN 58.498ºE), 2–8.VIII.2008, K. Tomkovich (2 ♀♀, ZMUM); **Buryatia**: the upper reaches of the River Irkut near Lake Il'chir (51.961ºN 100.952ºE), 7.VIII.2012, A. Medvedev (1 ♂, 1 ♀, ZMUM); Barguzinsky Nature Reserve (ca. 54.35ºN 109.51ºE), 20.VII.1965, Negrobov (1 ♂, 1 ♀, ZISP); Khamney (50.402ºN 103.868ºE), 29.VI.1971, V. Richter (1 ♀, ZISP); Selenduma (50.916ºN 106.239ºE), 25.VI.1971, V. Richter (1 ♀, ZISP); Mondy env. (51.675ºN 100.992ºE), 15.VII.1965, Gorodkov (22 ♂♂, 18 ♀♀, ZISP); Khargun, 6 km E of Kyren (51.683ºN 102.132ºE), Sayan, 11.VII.1965, Gorodkov (9 ♂♂, 7 ♀♀, ZISP); **Chukotka**: bank of the River Anadyr (64.72ºN 175.21ºE), 25.VI.–19.VII.2014, A. Barkalov, V. Zinchenko (25 ♂♂, 18 ♀♀, ZMUM and ISEA); the upper reaches of the River Bol'shaya (63.018ºN 171.846ºE), 16 and 18.VII.1959, Gorodkov (2 ♀♀, ZISP); **Irkutsk Oblast**: Nizhneudinsk (54.904ºN 99.038ºE), VII.1912, Parchevskaya (1 ♀, ZISP); same place, 16 and 17.VI.1917, Matusevich (1 ♂, 3 ♀♀, ZISP); Listvenichnoe [=Listvyanka] (51.863ºN 104.866ºE), 16.VII.1938, Dombrovskaya (2 ♀♀, ZISP); same place, 21.VI.1965, Negrobov (2 ♂♂, ZISP); **Kamchatka Krai**: Kozyrevsk (56.048ºN 159.870ºE), 14.VII.1985, V. Zlobin (3 ♀♀, ZISP); Petropavlovsk-Kamchatskiy (53.013ºN 158.657ºE), 25.VI.1959, Gorodkov (2 ♂♂, 2 ♀♀, ZISP); **Karelia**: Primorskiy (66.546ºN 33.103ºE), 5 and 6.VII.2010, A.L. Ozerov (1 ♂, 1 ♀, ZMUM); Poyakonda (66.589ºN 33.821ºE), 7.VII.2010, A.L. Ozerov (1 ♂, ZMUM); **Komi**: Seida (67.05ºN 63.09ºE), 23.VII.2010, N. Vikhrev (1 ♂, ZMUM); Ust-Tsilma (65.440ºN 52.153ºE), 9.VIII.1978, Gorodkov (1 ♂, ZISP); Ust'-Usa (65.980ºN 56.911ºE), 13.VIII.1978, Gorodkov (1 ♀, ZISP); **Krasnoyarsk Krai**: Kryuchkovo station (56.096ºN 62.109ºE), 13–15.VII.2009, K. Tomkovich (1 ♀, ZMUM); ~ Tanzybei (53.03ºN 93.18ºE), 26.VI.2017, N. Vikhrev (1 ♂, ZMUM); **Leningrad Oblast**: Rozhdestveno (59.322ºN 29.946ºE), 4, 15 and 28.VI.1956, A. Stackelberg (2 ♂♂, 1 ♀, ZISP); **Moscow and Moscow Oblast**: Molzhaninovka (55.936ºN 37.385ºE), 13.V.2010, A.L. Ozerov (2 ♂♂, ZMUM); Izmaylovo (55.786ºN 37.835ºE), 5.VI.1983, A.L. Ozerov (1 ♀, ZMUM); 35 km NNE of Moscow (56.200ºN 37.833ºE), 26.VI.1993, A.L. Ozerov (4 ♂♂, 1 ♀, ZMUM); Snegiri (55.887ºN 37.028ºE), 26.V.1984, Gorodkov (1 ♀, ZISP); **Primorsky Krai**: Spassk (44.600ºN 132.816ºE), 6.VI.1961, Zhelokhovtsev (1 ♀, ZMUM); Andreevka env. (42.7ºN 131.1ºE), 26–31.VII.2018, N. Vikhrev (1 ♂, 3 ♀♀, ZMUM); **Sverdlov Oblast**: Uktus station (56.780ºN 60.628ºE), 9.VII.1910, G. Yakobson (1 ♀, ZISP); **Tyumen' Oblast**: (63.766ºN 59.716ºE), 1–4.VII.2010, K. Tomkovich (2 ♂♂, 2 ♀♀, ZMUM); River It'yakh (61.85ºN 69.06ºE), 22.VII.2010, K. Tomkovich (1 ♀, ZMUM); Saranpaul' (64.257ºN 60.917ºE), 23.VI.1989, Malozemov (1 ♀, ZISP); Obdorsk [now=Salekhard] (66.53ºN 66.613ºE), 14.VIII.1925, Fridolin (1 ♂, ZISP); **Tuva**: River Uyuk (52.07ºN 94.04ºE), 800 m, 1–3.VII.2017, N. Vikhrev (2 ♂♂, ZMUM); **Yakutia**: 20 km above of the mouth of the River Biryuk (60.434ºN 119.497ºE), 15.VII. 2008, A. Ovchinnikov (2 ♂♂, 3 ♀♀, ZISP); River Biryuk, 4 km below of the mouth of the River Melichan (ca. 60.434ºN 119.495ºE), 13.VII.2008, A. Ovchinnikov (1 ♀, ZISP); River Yana, Stolby env. (67.531ºN 134.087ºE), 26–28.VII. 2008, A. Ovchinnikov (2 ♂♂, 7 ♀♀, ZISP); Yakutsk env., Chochur-Muran (62.034ºN 129.618ºE), 15.VIII.1972, Gorodkov (1 ♀, ZISP); Khaptagay (61.787ºN 129.795ºE), 7.VI.1974, Bagachanova (1 ♂, ZISP); Balagannakh (64.495ºN 143.817ºE), 4 and 7.VII.1974, Nartshuk (2 ♂♂, 1 ♀, ZISP); River Yana opposite of Verkhoyansk (67.550ºN 133.359ºE), 23.VII.1974, Nartshuk (1 ♂, 1 ♀, ZISP); Olekminsk env. (60.370ºN 120.436ºE), 2.VIII.1974, Nartshuk (1 ♀, ZISP); Verkhoyansk (67.548ºN 133.396ºE), 23.VII.1974, Gorodkov (1 ♀, ZISP); the mouth of the River Vityuy-ust, River Bakhanay (66.014ºN 123.654ºE), 17.VI.1875, Chekanovskiy (1 ♀, ZISP); **Zabaykalsky Krai**: Ulyatuy (51.172ºN 116.233ºE), 25–26.V.2014, A.F. Medvedev (3 ♂♂, 1 ♀, ZMUM); Bylyra (49.689ºN 111.720ºE), 19.VI.1975, V. Richter (1 ♂, ZISP).

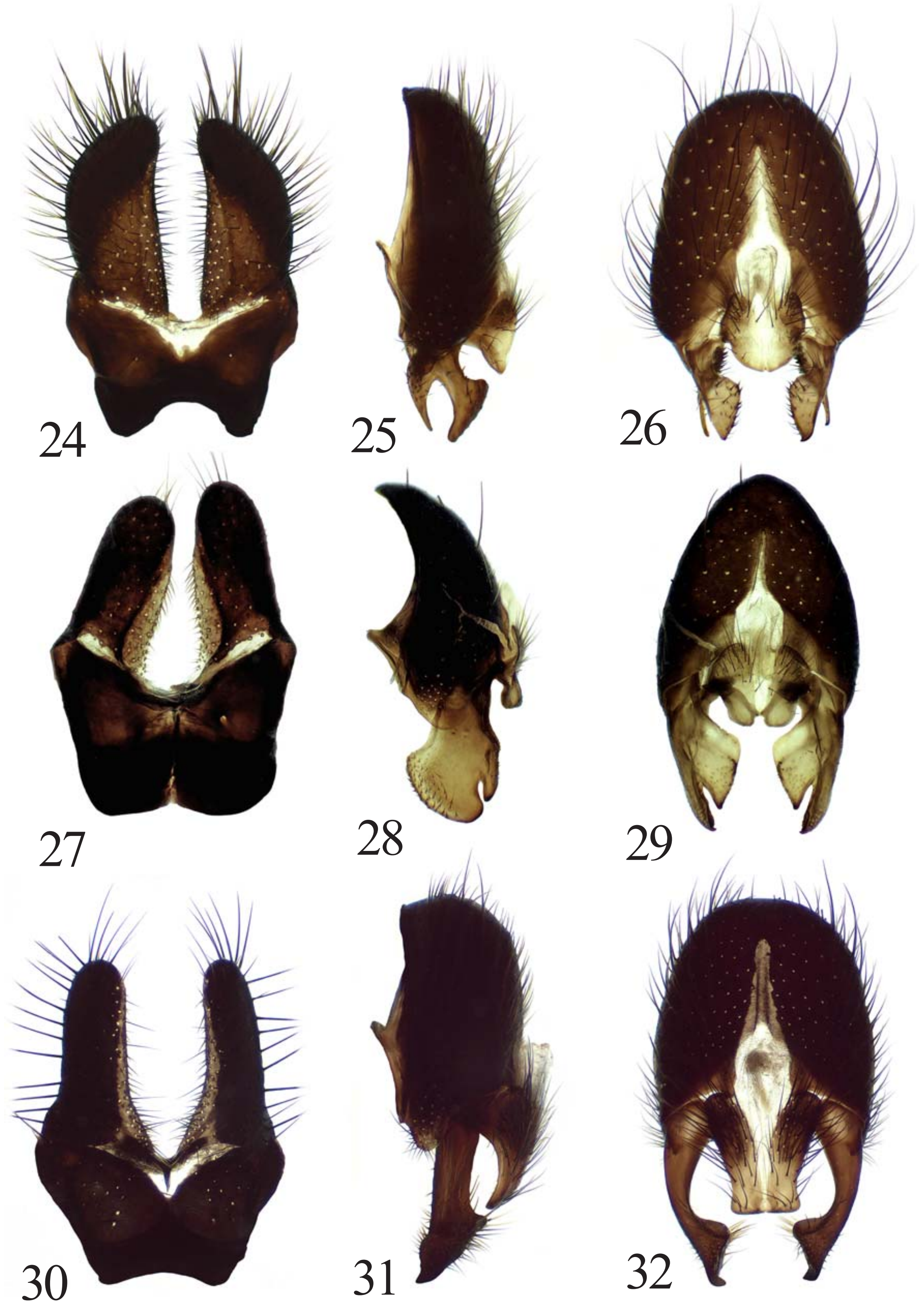
ADDITIONAL MATERIAL EXAMINED. **Mongolia**: Songino (47.851ºN 106.664ºE), 3–4.IX.1969, Zaitzev (1 ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 4.7–8.0 mm. *Head*. Frontal vitta from reddish yellow to blackish, with whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial yellow with whitish reflection. Gena from yellow to blackish. Postcranium black, greyish dusted. 3 orbital and 2–3 frontal setae present. Antenna black. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus black. *Thorax* black, greyish dusted. Acrostichals absent, dorsocentrals 3+3 (including scapular seta), intra-alars (0–1)+1, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* delicately greyish dusted. Femora of all legs black; fore tibia and tarsi of all legs yellow; mid and hind tibiae from yellow to blackish. *Wing* tinged with brownish; veins brownish. Vein R_1 bare on apical third of dorsal surface. *Abdomen* black, greyish dusted. Male sternite 4 rectangular, wider than long. Male sternite 5, epandrium and surstyli as in Figs 24–26.

DISTRIBUTION. Russia: Altai, Amur Oblast, Arkhangelsk Oblast, Bashkiria, Buryatia, Chukotka, Irkutsk Oblast, Kamchatka Krai, Karelia, Khabarovsk Krai, Komi, Leningrad Oblast, Magadan Oblast, Moscow Oblast, Murmansk Oblast, Primorsky Krai, Sverdlov Oblast, Tyumen' Oblast, Tuva, Yakutia, Zabaykalsky Krai. — Europe, Mongolia [Gorodkov, 1986: 14; Šifner, 2008: 117].

Cordilura aemula (Collin, 1958)
Figs 4, 27–29.

aemula Collin, 1958: 43 (*Cordylura*). Type-localities: "Barton Mills (Suffolk)" ... "Horning Ferry (Norfolk)" (Great Britain).



Figs 24–32. *Cordilura aberrans* (Becker) (24–26), *C. aemula* (Collin) (27–29) and *C. albilabris* (Fabricius) (30–32): 24, 27, 30 — male sternite 5; 25, 28, 31 — epandrium and surstyli, lateral view; 26, 29, 32 — same, dorsal view.

Рис. 24–32. *Cordilura aberrans* (Becker) (24–26), *C. aemula* (Collin) (27–29) и *C. albilabris* (Fabricius) (30–32): 24, 27, 30 — стернит 5 самца; 25, 28, 31 — эпандрий и сурстили, сбоку; 26, 29, 32 — то же, сверху.

REMARK. This species was recorded in Russia from Far East (including Amur Oblast and Khabarovsk Krai) by Ozerov & Krivosheina [2014: 206].

MATERIAL EXAMINED. **Kamchatka Krai**: Uzon (54.503ºN 159.99ºE), 20.VII.2009, L. Lobkova (1 ♀, ZMUM); **Primorsky Krai**: Kedrovaya Pad' Nature Reserve (43.104ºN 131.512ºE), 8–16.VI.2007, A. Ovchinnikov (1 ♂, ZISP); 15 km SW of Slavyanka (ca. 42.824ºN 131.234ºE), 16.VI.1993, Belokobyl'skiy (1 ♀, ZISP); Sikhote-Alin Nature Reserve, Blagodatnoe (44.975ºN 136.526ºE), 1–6.VI.2018, M. Sergeev (2 ♂♂, ZMUM); **Yakutia**: Yakutsk env. (62.159ºN 129.822ºE), 24.VI.1957, Gorodkov (1 ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 7.9–9.2 mm. *Head*. Frontal vitta reddish yellow, with whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial yellow with whitish reflection. Gena yellow or brownish. Postcranium black, grey dusted. 3 orbital and 2–4 frontal setae present. Antenna black. Postpedicel approximately 2–2.5 times as long as wide. Arista pubescent, the longest hairs approximately equal to 1/3–1/2 width of postpedicel (Fig. 4). Palpus black or brown. *Thorax* black, greyish dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including small scapular seta), intra-alars 1+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* greyish dusted. Femora of all legs black; tibiae and tarsi of all legs yellow; tarsomeres 2–4 of fore leg each with small black spot basally. *Wing* tinged with yellowish; veins yellowish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, greyish dusted. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 27–29.

DISTRIBUTION. Russia: Amur Oblast, Kamchatka Krai, Khabarovsk Krai, Primorsky Krai, Yakutia. — Europe.

Cordilura albilabris (Fabricius, 1805)
Figs 7, 30–32.

albilabris Fabricius, 1805: 315 (*Ocyptera*). Type-locality: "Habitat in Austria".

scirpi Robineau-Desvoidy, 1830: 669 (*Phrosia*). Type-locality: not given ("assez commune") (?France).

REMARK. Noted by Gorodkov [1986: 37] for European part of Russia without indicating specific locality.

MATERIAL EXAMINED. **Adygea**: Dakhovskaya env. (44.199ºN 40.170ºE), 465 m, 18–31.VIII.2009, K. Tomkovich (3 ♂♂, 1 ♀, ZMUM); Maykop (44.614ºN 40.106ºE), 30.VI.1911, G. Shaposhnikov (1 ♂, 1 ♀, ZISP); **Astrakhan' Oblast**: Zyuzino (45.751ºN 47.678ºE), 8–9.V.2010, K. Tomkovich (1 ♂, ZMUM); **Chechenya**: Tazbichi ravine, 6 km S of Itum-Kale (42.708ºN 45.598ºE), 8.VI.1972, V. Richter (1 ♂, ZISP); **Crimea**: (45.505ºN 34.135ºE), 27. VIII.1926, Zimin (1 ♀, ZISP); Simferopol' env. (44.951ºN 34.115ºE), 10.VI.1911, Pavlovskiy (1 ♂, ZISP); **Kaliningrad Oblast**: Primorsk (54.726ºN 20.004ºE), 19–21.VIII.2013, K.Tomkovich (1 ♂, ZMUM); **Krasnodar Krai**: L'vovskoe (44.992ºN 38.631ºE), 25.VII.1956, 27.IV. and 9.V.1957, G. Viktorov (3 ♂♂, ZMUM); Dakhovskaya env. (44.199ºN 40.170ºE), 465 m, 18–31.VIII.2009, K. Tomkovich (3 ♂♂, 1 ♀, ZMUM); Mezmayka (44.197ºN 39.957ºE), 27.VIII.2005, A. Ovchinnikov (2 ♂♂, ZISP); Teberdinsky Nature Reserve, Dzhamagat Valley (43.464ºN 41.736ºE), 8.VII.1982, Nartshuk (1 ♂, ZISP); **Kursk Oblast**: Oboyan' (51.191ºN 36.312ºE), 26.V.2007, N. Vikhrev (2 ♂♂, 1 ♀, ZMUM); same place, 25–26.V. and 20–21.VII.2007, A.L. Ozerov (5 ♂♂, 3 ♀♀, ZMUM); **Leningrad Oblast**: Yashchera (58.894ºN 29.820ºE), 26.V.1957, A. Stackelberg (3 ♂♂, 2 ♀♀, ZISP); **Mordovia**: Mordovsky Nature Reserve, River Pushta (54.71ºN, 43.22ºE), 8–12.VI.2020, N. Vikhrev (1 ♂, ZMUM); **Moscow and Moscow Oblast**: Bittsa (55.641ºN 37.570ºE), 26.VII.1936, B. Rohdendorf (1 ♂, 1 ♀, ZMUM); Izmaylovo (55.803ºN 37.841ºE, 55.802ºN 37.844ºE), 20.VI.2007, 17.V.2008, A.L. Ozerov (3 ♂♂, 6 ♀♀, ZMUM); Ostankino (55.828ºN 37.612ºE), 29.VII.1935 (1 ♂, ZMUM); Strogino (55.793ºN 37.408ºE), 19.V.20011, N. Vikhrev (1 ♂, ZMUM); Troitse-Lykovo (55.794ºN 37.418ºE), 21.VI.2009, N. Vikhrev (1 ♂, ZMUM); Abramtsevo (56.230ºN 37.956ºE), 12.VIII.1957, E.S. Smirnov (2 ♂♂, 5 ♀♀, ZMUM); Golitsyno (55.649ºN 37.011ºE), 21.V.1977, 9.VII.1983, A. Shatalkin (1 ♂, 1 ♀, ZMUM); Dmitrov env. (56.316ºN 37.725ºE), 11.VII.2007, 9.VI.2009, N. Vikhrev (2 ♂♂, ZMUM); Mamontovka (55.999ºN 37.816ºE), 3 and 16.VII.1956, E. Smirnov (2 ♂♂, ZMUM); Stepan'kovo (55.004ºN 35.624ºE), 15.VII.2006, 3.VI.2007, A.L. Ozerov (3 ♂♂, 4 ♀♀, ZMUM); Ivanovskoe (55.933ºN 35.627ºE), 14.V.2006, A.L. Ozerov (1 ♀, ZMUM); Smolevo (55.626ºN 38.964ºE), 2005, K. Tomkovich (1 ♀, ZMUM); Yakshino (55.922ºN 35.577ºE), 17.VII.2008, A.L. Ozerov (1 ♂, ZMUM); Dubna env. (56.748ºN 37.24ºE), 17.VIII.20015, N. Vikhrev (1 ♂, ZMUM); **Orenburg Oblast**: 10 km E of Tashla (51.771ºN 52.860ºE), 6–8.VIII.2004, Nartshuk (1 ♂, 3 ♀♀, ZISP); **Tyumen' Oblast**: Tyumen' Town (57.15ºN 65.53ºE), 13.VII.1964, Veselkin (1 ♀, ZISP); **Volgograd Oblast**: Torgun env. (50.300ºN 47.209ºE), 13.VII.2012, Astakhov (1 ♂, 1 ♀, ZISP); Verkhniy Balykley env. (49.535ºN 45.177ºE), 9.VIII.2012, Astakhov (1 ♂, ZISP).

ADDITIONAL MATERIAL EXAMINED. **Armenia**: Kirovakan [=Vanadzor] (40.807ºN 44.493ºE), 11.VII.1995, Zagulyaev (1 ♀, ZISP); **Kazakhstan**: River Bol'soy Bukon', 25 km ENE of Kokpekty, Semipalatinsk Oblast, 2.VIII.1978, Nartshuk (1 ♂, ZISP); Kokshetau (53.285ºN 69.396ºE), 6.VIII.1957, Nartshuk (1 ♂, ZISP); **Kirgyzstan**: Ak-Terek (41.293ºN 72.823ºE), 1800 m, 12 km W of Arslanbob, 18–22.VIII.1986, Tanasiychuk (1 ♂, ZISP); Rybach'e [=Balykchi] (42.465ºN 76.182ºE), 1600 m, 5.VIII.1969, Nartshuk (1 ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 5.2–7.2 mm. *Head* (Fig. 7). Frontal vitta from yellow to black; fronto-orbital plate black, shining. Face yellowish, with whitish reflection. Parafacial and gena from yellow to black. Postcranium black completely, mostly shining. 2 orbital and 4 frontal setae present. Scapus and pedicel brown; postpedicel blackish, approximately 3–3.5 times as long as wide (Fig. 7). Arista pubescent, the longest hairs approximately equal to 1/3–1/2 width of postpedicel. Palpus yellow. *Thorax* black; scutum shining with greyish stripe in centre, anepisternum and anepimeron mostly shining. Acrostichals absent, dorsocentrals 3+3 (including scapular seta), intra-alars absent, supra-alars 0+2, 1 postpronotal. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae or absent. *Legs* shining, yellow, only hind tibia and tarsi of all legs brownish. *Wing* tinged with brownish; veins blackish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, shining or subshining. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 30–32.

Description and figures of female ovipositor are given by Ovchinnikov [2009: 624] (as *Phrosia albilabris*).

DISTRIBUTION. Adygea, Astrakhan' Oblast, Chechenya, Crimea, Kaliningrad Oblast, Krasnodar Krai, Kursk Oblast, Leningrad Oblast, Mordovia, Moscow Oblast, Orenburg Oblast, Tyumen' Oblast, Volgograd Oblast. — Europe, Azerbaijan [Šifner, 2008: 125]; Armenia (**first record**), Kazakhstan (**first record**), Kyrgyzstan (**first record**).

Cordilura albipes (Fallén, 1819)
Figs 12, 21–23, 33–35.

albipes Fallén, 1819: 9 (*Cordylura*). Type-locality: "in Quasa Esperöd et in silva Gyllebo Scaniae" (Scåne, Sweden).

bilineata Meigen, 1838: 340 (*Cordylura*). Type-locality: not given ("Hiesige Gegend", ?nr Aachen).

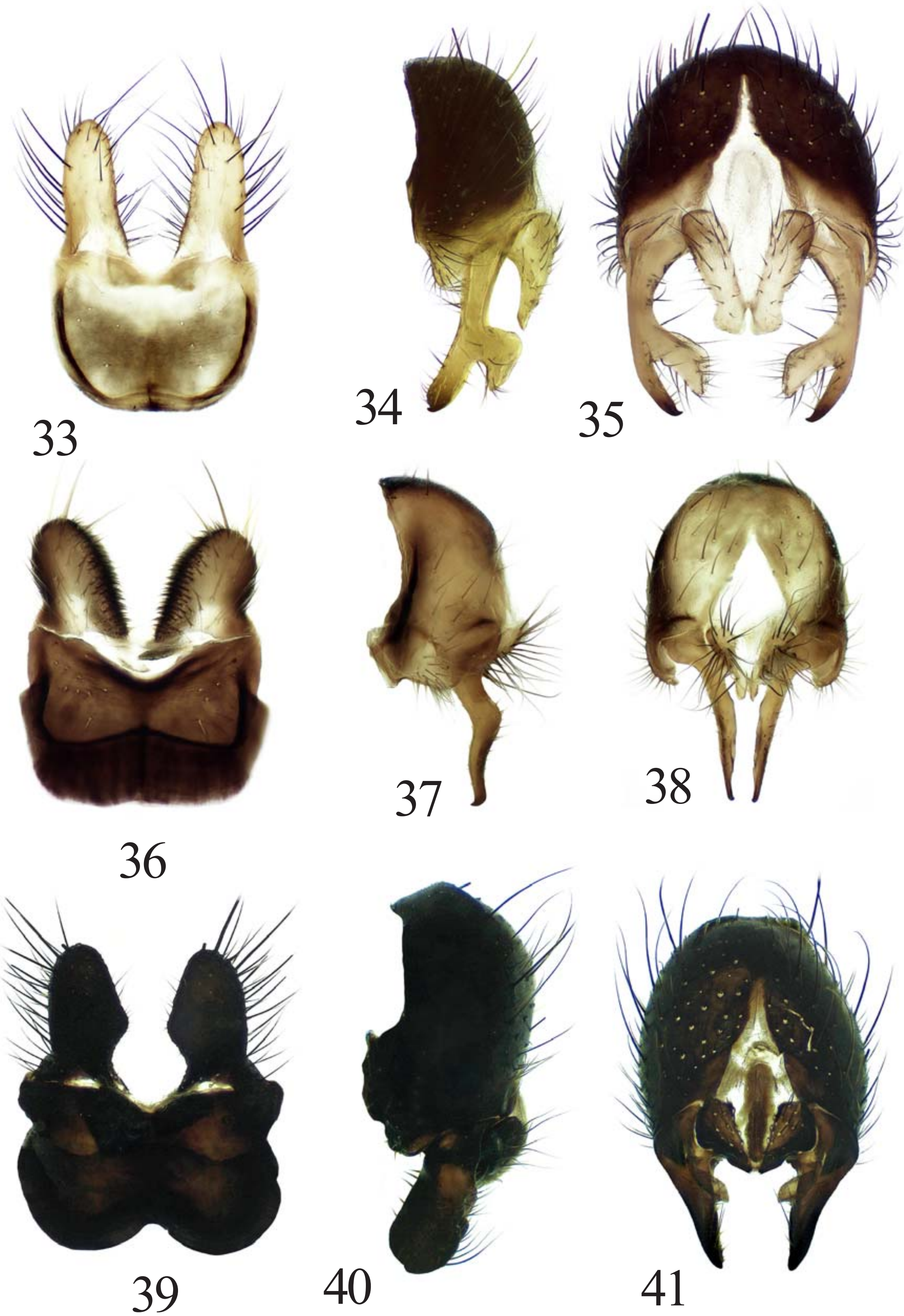
unicolor Loew, 1864: 17 (*Cordylura*). Type-locality: "Andalusien" (Spain).

REMARK. This species was recorded in Russia from European part and from Siberia without indicating specific locality by Gorodkov [1970: 446, 1986: 16]; noted from Karelia [Humala, Polevoi, 2009: 71], Far East [Ozerov, 2009: 379; Ozerov, Krivosheina, 2014: 206] and Yakutia [Bagachanova *et al.*, 2016: 779].

MATERIAL EXAMINED. **Adygea**: Lagonaki (44.093ºN 40.019ºE), 1725 m, 26–28.VI.2009, K. Tomkovich (5 ♂♂, ZMUM); Dakhovskaya env. (44.201ºN 40.149ºE), 12–13.VII.2012, K. Tomkovich (1 ♂, ZMUM); **Altai**: Bol'shoy Yaloman (50.489ºN 86.416ºE), 7–9.VII.1967, R. Kamenskaya (2 ♂♂, 4 ♀♀, ZMUM); Seminsky Pass, (51.06ºN 85.59ºE), 1650 m, 27–30.VI.2016, N. Vikhrev (1 ♂, ZMUM); **Arkhangelsk Oblast**: Vas'kovo (64.413ºN 40.457ºE), 18.VII.1996, Gorodkov (1 ♂, ZISP); **Buryatia**: Barguzinsky Nature Reserve, Sosnovka env. (ca. 54.182ºN 109.539ºE), 4.VIII.1962, Gorodkov (1 ♂, ZISP); **Chelyabinsk Oblast**: Taganay (55.277ºN 59.795ºE), 18–24.VII.2008, K. Tomkovich (4 ♂♂, 1 ♀, ZMUM); **Crimea**: Alushta-Rybachie (44.7–8ºN 34.4–6ºE), 18–25.IV.2014, N. Vikhrev (2 ♂♂, 1 ♀, ZMUM); **Dagestan**: 15 km SW of Sergocala (ca. 42.462ºN 47.662ºE), 15.VII.1983, Nartshuk (1 ♂, ZISP); **Irkutsk Oblast**: Baykal Port (51.874ºN 104.792ºE), 25.VI.1965, Negrobov (1 ♀, ZISP); Listvyanka (51.863ºN 104.866ºE), 21.VI.1965, Negrobov (1 ♀, ZISP); **Karelia**: Primorskiy (66.546ºN 33.103ºE), 1–6.VII.2010, A.L. Ozerov (1 ♂, 10 ♀♀, ZMUM); Poyakonda (66.589ºN 33.821ºE), 7.VII.2010, A.L. Ozerov (1 ♂, ZMUM); Kivach Nature Reserve (ca.62.295ºN 33.921ºE), 21.VI.1979, Gorodkov (3 ♂♂, 2 ♀♀, ZISP); **Kemerovo Oblast**: Tisul' (55.759ºN 88.310ºE), 21.VI.1911, Gorchakovskiy (2 ♂♂, ZISP); **Krasnodar Krai**: Azish-Tau ridge, "Kamyshanova Polyana" (44.168ºN, 40.044ºE), 1240 m, 10.IV.–3.V.2010, Kustov (1 ♂, 2 ♀♀, ZMUM); Sochi, Mt. Akhun (43.523ºN 39.879ºE), 25.IV.2008, N. Vikhrev (1 ♂, ZMUM); Sochi, Estosadok env., Mt. Psekhako (43.691ºN 40.366ºE), 14–18.VI.2008, K. Tomkovich (2 ♂♂, 2 ♀♀, ZMUM); Dakhovskaya env. (44.201ºN 40.149ºE), 12–13.VII.2012, K. Tomkovich (1 ♂, ZMUM); Lagonaki (44.093ºN 40.019ºE), 1725 m, 26–28.VI.2009, K. Tomkovich (5 ♂♂, ZMUM); Teberdinsky Nature Reserve (ca. 43.443ºN 41.738ºE), 15 and 20.V.1964, Gorodkov (3 ♂♂, 3 ♀♀, ZISP); Teberdinsky Nature Reserve (ca. 43.405ºN 41.721ºE), 3–19.V.1964, Gorodkov (2 ♂♂, 2 ♀♀, ZISP); **Krasnoyarsk Krai**: Kryuchkovo station (56.096ºN 92.109ºE), 14–23.VII.2009, K. Tomkovich (5 ♂♂, 5 ♀♀, ZMUM); Ergaki Nature Park (52.84ºN 93.25ºE), 1450 m, 27–29.VI.2017, N. Vikhrev (3 ♂♂, ZMUM); **Leningrad Oblast**: Luga (ca. 58.73ºN 29.84ºE), 21.VI. and 8.VIII.1955, A. Stackelberg (2 ♂♂, ZISP); Rozhdestveno (59.322ºN 29.946ºE), 15.VI.1957, A. Stackelberg (2 ♀♀, ZISP); Sablino (ca. 59.63ºN 30.76ºE), 16.VI.1923, A. Stackelberg (1 ♂, ZISP); **Mordovia**: Mordovsky Nature Reserve, Cordon Novin'kovsky (54.931ºN, 43.421ºE), 4–7.VII.2020, K. Tomkovich (1 ♂, ZMUM); **Moscow and Moscow Oblast**: Bittsa (55.641ºN 37.570ºE), 24.VI., 26–31.VII.1936, B. Rohdendorf (1 ♂, 7 ♀♀, ZMUM); same place, 29.VI.1936, E. Smirnov (2 ♂♂, 2 ♀♀, ZMUM); Izmaylovo (55.800ºN 37.832ºE, 55.802ºN 37.840ºE), 5.IX.1981, 26–30.V. and 5.VI.1982, 17.IV, 26.V. and 2.VII.1983, 18.V.2008, A.L. Ozerov (9 ♂♂, 5 ♀♀, ZMUM); Kuntsevo (55.720ºN 37.473ºE), 17, 19 and 26.V., 18.VI. and 2.VII.1983, 13.V.1992, 16.VI.1993, A.L. Ozerov (4 ♂♂, 2 ♀♀, ZMUM); Tsaritsyno (55.616ºN 37.683ºE), 5–10.X.2009, K. Tomkovich (1 ♂, ZMUM); 20 km WSW of Volokolamsk (55.983ºN 35.616ºE), 13.VII.1999, A.L. Ozerov (1 ♂, ZMUM); 35 km NNE of Moscow (56.200ºN 37.833ºE), 26.VI.1993, A.L. Ozerov (2 ♂♂, 1 ♀, ZMUM); Abramtsevo (56.230ºN 37.956ºE), 13.VIII.1955, E.S. Smirnov (1 ♀, ZMUM); Andreevskoe (55.974ºN 35.604ºE), 4.VIII.2005, A.L. Ozerov (2 ♀♀, ZMUM); Burtsevo env. (55.981ºN 35.597ºE, 55.975ºN 35.589ºE, 55.978ºN 35.589ºE, 55.975ºN 35.586ºE), 25.V., 2–3 and 18.VI.2006, 25.VII. and 1.VIII.2007, 29.V.2010, A.L. Ozerov (4 ♂♂, 4 ♀♀, ZMUM); Vostochnyy (55.366ºN 36.498ºE), 20.V.2010, D. Gavryushin (2 ♂♂, ZMUM); Golitsyno (55.649ºN 37.011ºE), 23.V.1976, 21.V.1977, 9.IX.1979, 7.VI.1980, 29.V. and 5.VI.1981, 7.VIII.1983, 3.VIII.1989, A. Shatalkin (10 ♂♂, 1 ♀, ZMUM); Dmitrov env. (56.316ºN 37.725ºE), 10.VI. and 29.VII.2006, 19.V.2007, N. Vikhrev (4 ♂♂, ZMUM); Zosimova Pustyn' (55.412ºN 36.814ºE), 24 and 28.V.2010, D. Gavryushin (1 ♂, 1 ♀, ZMUM); Ivanovskoe (55.939ºN 35.621ºE), 12.VI.2006, A.L. Ozerov (1 ♂, ZMUM); Ignatkovo (55.939ºN 35.620ºE), 13.VI.2008, A.L. Ozerov (1 ♂ ZMUM); Mamontovka (55.999ºN 37.816ºE), 3 and 16.VII.1956, E. Smirnov (1 ♂, ZMUM); Molzhaninovka (55.936ºN 37.385ºE), 13.V.2010, A.L. Ozerov (1 ♂, ZMUM); Naro-Fominsk env. (55.357ºN 36.736ºE, 55.364ºN 36.738ºE, 55.364ºN 36.741ºE, 55.393ºN 36.779ºE, 55.375ºN 36.756ºE, 55.372ºN 36.757ºE), 4 and 16.VI.2006, 22.V., 3 and 7.VI.2007, 13.V.2008, 8.VI. and 2.VIII.2010, 18.V.2012, D. Gavryushin (5 ♂♂, 5 ♀♀, ZMUM); Ozhigovo (55.453ºN 36.884ºE), 26.VII.2010, D. Gavryushin (1 ♀, ZMUM); Rodinka (55.774ºN 36.291ºE), 5.VI.2012, D. Gavryushin (1 ♂, ZMUM); Stepan'kovo (55.004ºN 35.624ºE), 3.VI.2007, A.L. Ozerov (2 ♂♂, ZMUM); **Murmansk Oblast**: Kolvitsa (67.082ºN 33.183ºE), 8.VIII.1995, Gorodkov (2 ♀♀, ZISP); **Nizhegorod Oblast**: Dzerzhinsk (56.21ºN 43.62ºE), 17.VIII.2009, N. Vikhrev (1 ♀, ZMUM); **North Ossetia – Alania**: Bakhty-Laparyrag range (42.938ºN 44.287ºE), 1770 m, 1–14.VI.1989 and 28–30.VI.1990, A.L. Ozerov, A. Shatalkin (4 ♂♂, 6 ♀♀, ZMUM); Buron env. (43.793ºN 43.922ºE), 20–29.VI.1988, 6–7.VI.1989, 28.VI. and 5–6.VII.1990, A.L. Ozerov, A. Shatalkin (6 ♂♂, 7 ♀♀, ZMUM); Alagir env. (43.015ºN 44.224ºE), 17.VII.1990, A.L. Ozerov (1 ♂, ZMUM); Vladikavkaz (43.044ºN 44.682ºE), 16. IV.1899, Demokidov (1 ♀, ZISP); **Novgorod Oblast**: Ramen'e (58.374ºN 33.430ºE), Okulovka env., 4.VI.1988, Gorodkov (1 ♂, ZISP); **Novosibirsk Oblast**: Novosibirsk (54.842ºN 83.114ºE), 14.VI.2008, O. Kosterin (1 ♂, ZMUM); 4 km S of Novososedovo (54.616ºN 83.985ºE), 7.VII.2008, O. Kosterin (1 ♂, ZMUM); (55.52ºN 83.24ºE), 22.V.2011, O. Kosterin (3 ♂♂, ZMUM); **Primorsky Krai**: Kedrovaya Pad' Nature Reserve (43.104ºN 131.512ºE), 8–16.VI.2007, A. Ovchinnikov (1 ♀, ZISP); **Rostov Oblast**: Kamensk-Shakhtinsky (48.293ºN 40.257ºE), 25.V.2011, D. Gavryushin (2 ♀♀, ZMUM); **Ryazan' Oblast**: Kasimov (54.94ºN 41.34ºE), 25.VII.2013, N. Vikhrev (1 ♂, ZMUM); **Sakhalin Oblast**: Sakhalin I., Mt. Chekhov (47.005ºN 142.839ºE), 29.VI.1973, Kasparyan (1 ♀, ZISP); **Tatarstan**: Volzhsko-Kamsky Nature Reserve, Lake Raifa (55.897ºN 48.733ºE), 19.VII.2007, Basov (1 ♂, ZMUM); **Tomsk Oblast**: Basandayka (56.283ºN 85.489ºE), 23.VI.1967, Gorodkov (5 ♂♂, ZISP); **Tyumen' Oblast**: (63.766ºN 59.716ºE), 1–4.VII.2010, K. Tomkovich (2 ♂♂, ZMUM); (63.818ºN 59.562ºE), 1–4.VII.2010, K. Tomkovich (3 ♂♂, 1 ♀, ZMUM); River Soromlorop'yavin (62.650ºN 71.891ºE), 26.VII.2010, K. Tomkovich (1 ♀, ZMUM); Sob' env. (67.07ºN 65.46ºE), 26–31.VII.2011, K. Tomkovich (1 ♂, ZMUM); Surgut (61.259ºN 73.418ºE), 27.VII.1977, Gorodkov (3 ♀♀, ZISP); **Tuva**: Kyzyl env. (51.7ºN 94.7ºE), 5–7.VII.2017, N. Vikhrev (1 ♂, ZMUM); **Zabaykalsky Krai**: Baley (51.579ºN 116.634ºE), 18.VII.1971, V. Richter (1 ♂, ZISP).

ADDITIONAL MATERIAL EXAMINED. **Armenia**: Bashkend [now = Artsvashen] (40.641ºN 45.523ºE), 24.VII.1976, Nartshuk (1 ♂, ZISP); **Belarus**: Belovezhskaya Pushcha (52.707ºN 23.862ºE), 14 and 17.VII., 5.VIII.1961, Nartshuk (1 ♂, 2 ♀♀, ZISP); Korolevo (55.303ºN 30.212ºE), 27.VI.1905, Birulya (1 ♂, ZISP); **Georgia**: Tsagveri (41.800ºN 43.481ºE), 1200 m, 8 and 12.V.1969, Gorodkov (7 ♂♂, 2 ♀♀, ZISP); Borzhomi park (41.891ºN 43.321ºE), 880–900 m, 16.V.1969, Gorodkov (1 ♂, ZISP); **Mongolia**: Ulan-Bator env. (ca. 47.907ºN 106.931ºE), 24–29.VI.1970, Nartshuk (2 ♂♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 3.8–6.2 mm. *Head*. Frontal vitta from yellow to brownish; fronto-orbital plate yellowish. Face, parafacial and gena yellowish, with weak whitish re-



Figs 33–41. *Cordilura albipes* (Fallén) (33–35), *C. amurensis* Ozerov (36–38) and *C. atrata* (Zetterstedt) (39–41): 33, 36, 39 — male sternite 5; 34, 37, 40 — epandrium and surstyli, lateral view; 35, 38, 41 — same, dorsal view.

Рис. 33–41. *Cordilura albipes* (Fallén) (33–35), *C. amurensis* Ozerov (36–38) и *C. atrata* (Zetterstedt) (39–41): 33, 36, 39 — стернит 5 самца; 34, 37, 40 — эпандрий и сурстили, сбоку; 35, 38, 41 — то же, сверху.

flection. Postcranium yellow completely or yellow in lower part and black in upper half or third. 2 orbital and 2–4 frontal setae present. Antenna pale yellow. Postpedicel approximately 2 times as long as wide. Arista plumose, longest hairs approximately as long as width of postpedicel. Palpus yellow. *Thorax* yellow in ground colour; scutum varies in colour from shiny black completely to almost yellow completely, usually yellow with two blackish stripes along dorsocentral lines. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars (0–1)+(0–2), supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae or absent (Fig. 12). *Legs* shining, usually yellow completely, sometimes mid and hind femora slightly darkened. *Wing* tinged with brownish; veins blackish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* from yellow to black, shining or subshining. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 33–35. Female ovipositor as in Figs 21–23.

DISTRIBUTION. Russia: Adygea, Altai, Arkhangelsk Oblast, Buryatia, Chelyabinsk Oblast, Crimea, Dagestan, Irkutsk Oblast, Karelia, Kemerovo Oblast, Krasnodar Krai, Krasnoyarsk Krai, Leningrad Oblast, Mordovia, Moscow Oblast, Murmansk Oblast, Nizhegorod Oblast, North Ossetia – Alania, Novgorod Oblast, Novosibirsk Oblast, Primorsky Krai, Rostov Oblast, Ryazan' Oblast, Sakhalin Oblast, Tatarstan, Tomsk Oblast, Tyumen' Oblast, Tuva, Yakutia, Zabaykalsky Krai. — Europe, including Belarus (**first record**), Armenia (**first record**), Georgia (**first record**), Iran [Khaghaninia, Gharajedaghi, 2014: 391], Mongolia, Japan [Iwasa, 2020: 472].

Cordilura amurensis Ozerov, 2007
Figs 36–38.

amurensis Ozerov, 2007b: 123 (*Cordilura*). Type-locality: Zeya Town (Russia, Amur Oblast).

REMARK. This species was described and recorded in Russia from Amur Oblast and Khabarovsk Krai [Ozerov, 2007b: 123; Ozerov, Krivosheina, 2014: 207].

MATERIAL EXAMINED. **Amur Oblast**: Zeya Town (53.748ºN 127.261ºE), 23–27.VI. and 7.VII.1978, 27–30.VII.1982, A. Shatalkin (2 ♂♂, 7 ♀♀, ZMUM); Zeysky Nature Reserve, cordon "34 km" (53.989ºN 127.073ºE), 27 and 28.VII.1981, A.L. Ozerov, A. Shatalkin (1 ♂, 2 ♀♀, ZMUM); Zeysky Nature Reserve, cordon "52 km" (54.087ºN 126.871ºE), 2–9.VII.1981, A. Shatalkin (3 ♂♂, 1 ♀, ZMUM).

DESCRIPTION. Male. Female. Body-length 3.6–5.1 mm. *Head*. Frontal vitta yellow, matt; fronto-orbital plate yellow, whitish dusted. Face, parafacial and gena whitish. Postcranium greyish dusted, blackish or yellow in upper half and whitish in lower half. 2 orbital and 2–3 frontal setae present. Scapus and pedicel yellow, postpedicel blackish in male and yellow in female. Postpedicel approximately 2 times as long as wide. Arista nearly bare. Palpus pale yellow. *Thorax* reddish yellow completely or brownish in upper part, delicately greyish dusted. Acrostichals absent, dorsocentrals 3+3 (including scapular seta), intra-alars 1+0, supra-alars 1+2, 1–2 postpronotals. Scutellum with a pair of strong discal setae and a pair of apical setulae. *Legs* yellow, but usually tarsomere 5 dark brownish. *Wing* tinged with light brownish; veins brownish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* blackish greyish dusted; female tergite 6 yellow. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 36–38.

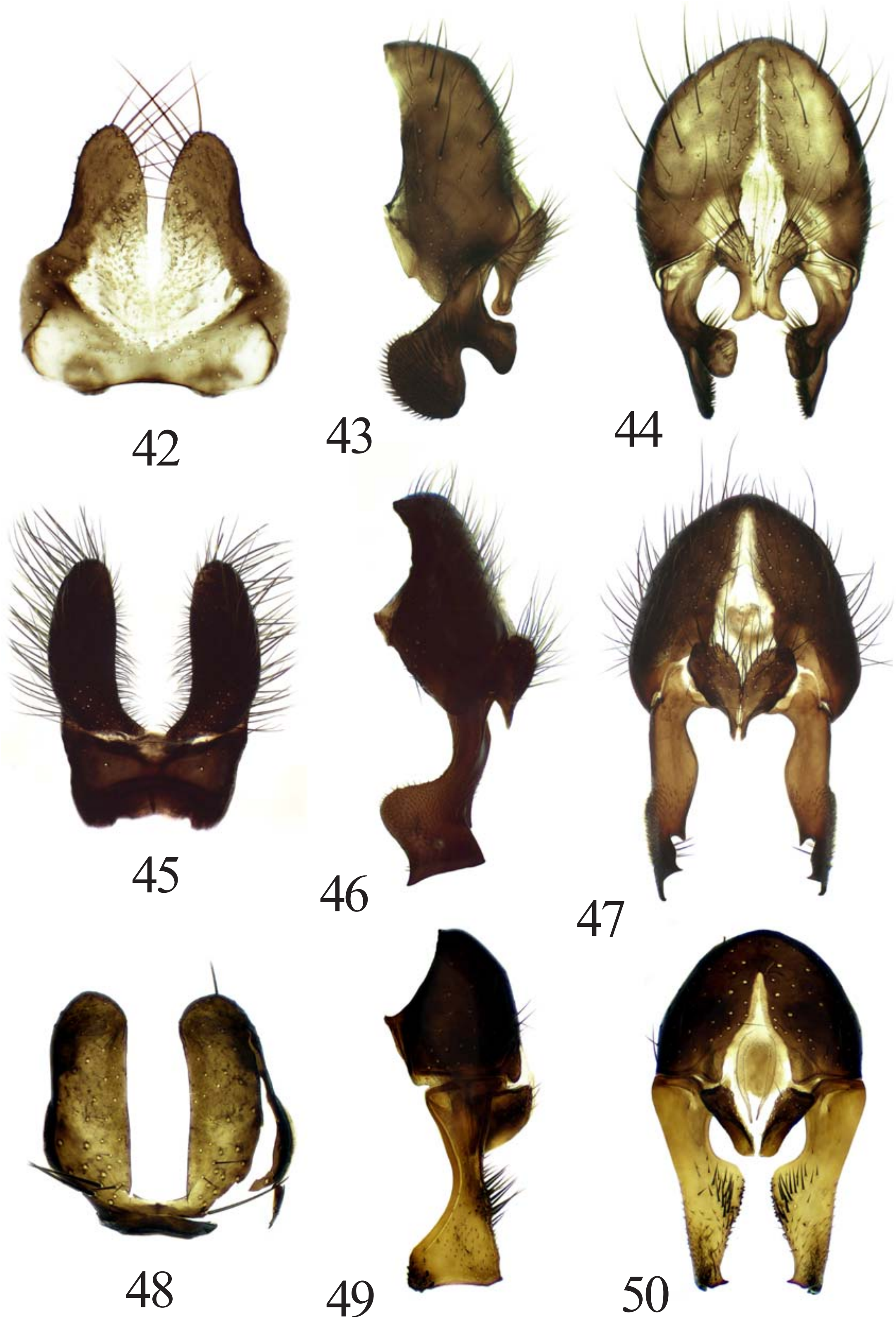
DISTRIBUTION. Russia: Amur Oblast, Khabarovsk Krai.

Cordilura atrata (Zetterstedt, 1846)
Figs 39–41.

atrata Zetterstedt, 1846: 2002 (*Cordylura*). Type-locality: "Lapponia Lulensi ad Qvickjock ... ad Råbäcken ... in Jemtlandia ad Skalstugan & in ipso jugo alpino Norwegiae inter Kongsstuen & Suulstuen" (Sweden, Norway).

REMARK. This species was noted for European part of Russia (Kola Peninsula, Komi, Polar Ural) [Gorodkov, 1970: 446] and Siberia without indicating specific locality [Gorodkov, 1986: 14], also from Far East, including Khabarovsk Krai and Magadan Oblast [Ozerov, Krivosheina, 2014: 207], and Yakutia [Bagachanova *et al.*, 2016: 779].

MATERIAL EXAMINED. **Arkhangelsk Oblast**: Nenetsky Nature Reserve, cordon "Bol'shoy Gusinets" (68.175ºN, 53.645ºE), 10.VII.2008, N.E. Vikhrev (3 ♂♂, 1 ♀, ZMUM); the lower reaches of the River Pechora, Kashin I. (68.242ºN, 53.856ºE), 10.VII.2008, A.L. Ozerov (2 ♂♂, ZMUM); Nar'yan-Mar (67.636ºN 53.031ºE), 2, 4 and 20.VIII.1978, Gorodkov (8 ♂♂, 5 ♀♀, ZISP); 73 km NW of Nar'yan-Mar (ca. 67.981ºN 51.608ºE), 3.VIII.1978, Gorodkov (7 ♂♂, 6 ♀♀, ZISP); 70 km N of Nar'yan-Mar (ca. 68.204ºN 53.627ºE), 18.VIII.1978, Gorodkov (2 ♂♂, ZISP); **Chukotka**: Meynypil'gyno env. (62.538ºN, 177.051ºE), 9.VII.2013, P.C. Tomkovich (1 ♂, 1 ♀, ZMUM); Meynypil'gyno env. (62.553ºN 177.038ºE), 13.VII.2015, P.S. Tomkovich (3 ♂♂, ZMUM); bank of the River Anadyr (64.72ºN 175.21ºE), 25.VI.–19.VII.2014, A. Barkalov (1 ♂, ISEA); 20 km SSW of Iul'tin (67.724ºN 178.515ºW), 22.VII.1963, Gorodkov (1 ♀, ZISP); **Kamchatka Krai**: Uzon (54.503ºN 159.990ºE), 9.VII.1987, L. Lobkova (1 ♂, ZMUM); **Komi**: Vorkuta (67.5ºN 64.0ºE), 19–25.VII.2010, N. Vikhrev (2 ♀♀, ZMUM); Shchel'yabozh (66.29ºN 56.45ºE), 14 and 15.VIII.1978, Gorodkov (1 ♂, 1 ♀, ZISP); Sivaya Maska station (66.675ºN 62.569ºE), 5 km NW, 14.VII.1961, Gorodkov (1 ♂, ZISP); **Krasnoyarsk Krai**: Medvezhiy (69.284ºN 88.148ºE), Noril'sk env., 6.VII.1967, Gorodkov (3 ♂♂, 3 ♀♀, ZISP); Noril'sk env. (69.339ºN 88.214ºE), 26.VIII.1975, Gorodkov (1 ♂, ZISP); 104 km NNW of Noril'sk, River Nizhnyaya Agapa (ca. 70.097ºN 86.688ºE), 26.VII.1973, Sukacheva, Zherikhin (1 ♂, ZISP); Agapa (71.421°N 89.2512ºE), River Pyasina, 15.VII.1967, Gorodkov (3 ♂♂, ZISP); Dudinka (69.407ºN 86.175ºE), 3.VII.1967, Gorodkov (1 ♂, ZISP); Igarka (67.468ºN 86.581ºE), 30.VI. and 1.VII.1967, Gorodkov (4 ♂♂, 2 ♀♀, ZISP); **Mordovia**: Mordovsky Nature Reserve, Cordon Steklyanny (54.894ºN, 43.601ºE), 12–15.VII.2020, K. Tomkovich (1 ♂, ZMUM); **Moscow Oblast**: Andreevskoe (55.967ºN 35.609ºE), 6.V.2009, A.L. Ozerov (2 ♂♂, ZMUM); Dmitrov env. (56.316ºN 37.725ºE), 27.V.2009, N. Vikhrev (1 ♂, 1 ♀, ZMUM); 35 km NNE of Moscow (56.200ºN 37.833ºE), 26.VI.1993, A.L. Ozerov (1 ♂, ZMUM); **Murmansk Oblast**: Lovozero (68.005ºN 35.016ºE), 14.VIII.1981, Gorodkov (1 ♀, ZISP); **Leningrad Oblast**: Rozhdestveno (59.322ºN 29.946ºE), 4.VI.1956, A. Stackelberg (1 ♂, 1 ♀, ZISP); Yashchera (58.894ºN 29.820ºE), 23.VII.1957, A. Stackelberg (1 ♂, ZISP); Lakhta (59.991ºN 30.159ºE), 15.VI.1919, A. Stackelberg (1 ♀, ZISP); **Novosibirsk Oblast**: Zherebtsovo env. (55.125ºN 83.256ºE), 31.V.2008, O. Kosterin (1 ♂, ZMUM); **Sakhalin Oblast**: Iturup I., Kurilsk



Figs 42–50. *Cordilura bicoloripes* Ozerov (42–44), *C. ciliata* (Meigen) (45–47) and *C. fulvifrons* Ozerov (48–50): 42, 45, 48 — male sternite 5; 43, 46, 49 — epandrium and surstyli, lateral view; 44, 47, 50 — same, dorsal view. 48–50 — after Ozerov & Krivosheina, 2017, figs 4–6.

Рис. 42–50. *Cordilura bicoloripes* Ozerov (42–44), *C. ciliata* (Meigen) (45–47) и *C. fulvifrons* Ozerov (48–50): 42, 45, 48 — стернит 5 самца; 43, 46, 49 — эпандрий и сурстили, сбоку; 44, 47, 50 — то же, сверху. 48–50 — по Ozerov & Krivosheina, 2017, figs 4–6.

(45.226ºN 147.881ºE), 25.VI.1968, V. Richter (2 ♂♂, 1 ♀, ZISP); **Tyumen' Oblast**: Saranpaul' (64.257ºN 60.917ºE), 23.VI.1989, Malozemov (1 ♂, ZISP); Nyda (66.628ºN 72.922ºE), 3.VIII.1977, Gorodkov (2 ♀♀, ZISP); 75 km WSW of Samburg (ca. 67.035ºN 76.541ºE), 7.VIII.1976, Gorodkov (1 ♀, ZISP); **Yakutia**: airport Saskylach (71.934ºN 114.083ºE), 24.VII.1988, Gorodkov (2 ♂♂, ZISP); Saskylakh env. (71.966ºN 114.094ºE), 24 and 27.VIII.1988, Gorodkov (2 ♀♀, ZISP); Ust'-Kuyga (70.000ºN 135.562ºE), 26.VII. 1974, Gorodkov (3 ♂♂, 1 ♀, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 4.6–5.8 mm. *Head*. Frontal vitta black or dark brown, frequently reddish yellow apically, with whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial yellowish with whitish reflection. Gena brownish. Postcranium black, grey dusted. 3 orbital and 2–3 frontal setae present. Antenna black. Postpedicel approximately 2 times as long as wide. Arista pubescent, the longest hairs approximately equal to 1/3–1/2 width of postpedicel. Palpus black. *Thorax* black, grey dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including small scapular seta), intra-alars 1+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* greyish dusted. Fore coxa black; femora, tibiae and tarsi of all legs black. *Wing* tinged with brownish; veins blackish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, grey dusted. Male sternite 4 rectangular, wider than long. Male sternite 5, epandrium and surstyli as in Figs 39–41.

DISTRIBUTION. Russia: Arkhangelsk Oblast, Chukotka, Kamchatka Krai, Komi, Krasnoyarsk Krai, Mordovia, Moscow Oblast, Murmansk Oblast, Leningrad Oblast, Novosibirsk Oblast, Sakhalin Oblast, Tyumen' Oblast, Yakutia. — Europe, North America.

Cordilura bicoloripes Ozerov, 1997
Figs 42–44.

bicoloripes Ozerov, 1997: 1424 (*Cordilura*). Type-locality: 40 km SE of Ussuriysk (Russia, Primorsky Krai).

REMARK. This species was described and recorded in Russia from Primorsky Krai only [Ozerov, 1997: 1424; Ozerov, Krivosheina, 2014: 207].

MATERIAL EXAMINED. **Primorsky Krai**: Kamenushka (43.634ºN 132.222ºE), 6.VIII.1984, 6–25.VIII., 3–4.IX.1987, A. Shatalkin (4 ♂♂, 4 ♀♀, ZMUM); same place, 4.IX.1983, A.L. Ozerov (1 ♂, ZMUM); Kedrovaya Pad' Nature Reserve (43.104ºN 131.512ºE), 17 and 19.VIII.1962, Nartshuk (1 ♂, 1 ♀, ZISP); Kievka (42.904ºN 133.701ºE), 6–7.IX.1980, A. Shatalkin (1 ♂, 2 ♀♀, ZMUM); Sudzukhinskiy [=Lazovsky] Nature Reserve, Tachingou (43.023ºN 134.136ºE), 30.IX., 2–9.X.1948, Gussakovskiy (5 ♀♀, ZMUM); Tigrovoy [=Tigrovoe] (43.189ºN 132.894ºE), 26.VIII.1962, Nartshuk (1 ♂, 1 ♀, ZISP); riverhead of the River Chapingou [= Krounovka], tributary of the River Shufan [=Borisovka] (ca. 43.615ºN 131.541ºE), 1.VII.1962, Nartshuk (1 ♂, 1 ♀, ZISP); Vladivostok env., Okeanskaya (43.234ºN 132.014ºE), 3.IX.1978, A. Zinoviev (1 ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 6.0–9.2 mm. *Head*. Frontal vitta and fronto-orbital plate black, with whitish reflection. Face and parafacial yellow with whitish reflection in male and black with whitish reflection in female. Gena black in both sexes. Postcranium black, grey dusted. 2 orbital and 3–4 frontal setae present. Antenna brownish or blackish. Postpedicel approximately 2.5 times as long as wide. Arista pubescent, the longest hairs approximately equal to 1/3–1/2 width of postpedicel. Palpus yellow. *Thorax* black, delicately grey dusted, but scutum shining. Acrostichals absent, dorsocentrals 2+3 (including small scapular seta), intra-alars absent, supra-alars 0+2, postpronotals absent. Scutellum with a pair of strong discal setae only; apical scutellar setae absent. *Legs* shining. Femora of all legs bicolor: black in apical part and yellow in basal half or third; tibiae and tarsomeres 1–3 of all legs yellow, tarsomeres 4 and 5 of all legs brown or black. *Wing* tinged with brownish, darkened in apical third; veins yellowish. Vein R_1 bare on apical third of dorsal surface. *Abdomen* black, shining. Male sternite 4 rectangular, slightly longer than wide. Male sternite 5, epandrium and surstyli as in Figs 42–44.

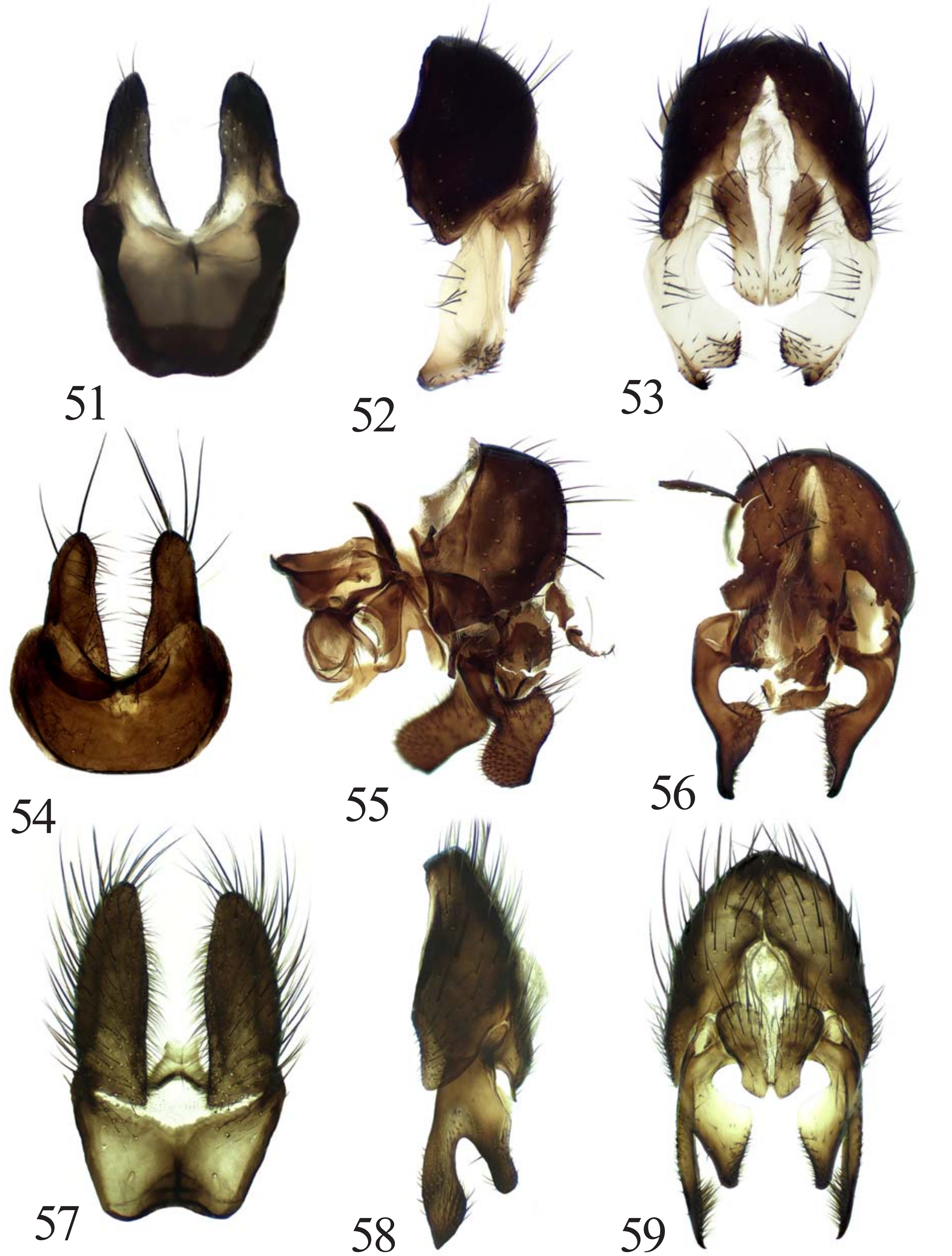
DISTRIBUTION. Russia: Primorsky Krai.

Cordilura ciliata (Meigen, 1826)
Figs 6, 45–47.

ciliata Meigen, 1826: 231 (*Cordylura*). Type-locality: not given.

REMARK. Recorded for European part of Russia without indicating specific locality [Gorodkov, 1970: 446, 1986: 14] and from Karelia [Humala, Polevoi, 2009: 71].

MATERIAL EXAMINED. **Altai**: Kosh-Agach, plato Ukok, 2400 m, Lake Muzdy-Bulak env. (49.26ºN, 87.65ºE), 10–12.VII.2008, A. Barkalov, (2 ♂♂, 2 ♀♀, ISEA); Verkh-Kukuya env., floodplain of the River Sema, 980 m, (51.516ºN, 85.566ºE), 17.VII.2011, V. Sorokina (1 ♂, ISEA); Cherga env., floodplain of the River Sema, 516 m, (51.516ºN 85.566ºE), 16.VII.2011, V. Sorokina (2 ♂♂, 1 ♀, ISEA); Ulus-Cherga (51.519ºN 85.459ºE), 27.VII.2008, O. Kosterin (1 ♀, ZMUM); Lake Teletskoe, 25 km S of Yogach, Obogo Pass (51.55ºN 87.26ºE), 1077 m, 11.VIII.2017, V.S. Sorokina (1 ♂, ISEA); **Arkhangelsk Oblast**: Solvychegodsk (61.342ºN 46.913ºE), 13.VIII.2010, D. Gavryushin (3 ♂♂, 7 ♀♀, ZMUM); Arkhangelsk (64.546ºN 40.567ºE), 4.VIII.2010, D. Gavryushin (1 ♂, 2 ♀♀, ZMUM); Talagi (64.620ºN 40.648ºE), 13.VIII.1970, Gorodkov (1 ♂, ZISP); **Bashkiria**: Beloretsk (53.963ºN 58.765ºE), 12.VIII.2012, D. Gavryushin (1 ♂, 2 ♀♀, ZMUM); Beloretsk distr., River Nura (54.051ºN 58.268ºE), 10, 13 and 16.VII.2015, D. Gavryushin (5 ♂♂, ZMUM); **Chelyabinsk Oblast**: Taganay (55.277ºN 59.795ºE), 18–24.VII.2008, K. Tomkovich (1 ♀, ZMUM); **Karelia**: Primorskiy (66.546ºN 33.103ºE), 3–5.VII.2010, A.L. Ozerov (3 ♀♀, ZMUM); Kaskesnavolok (61.594ºN 33.323ºE), 20.VI.1979, Gorodkov (1 ♂, ZISP); **Kemerov Oblast**: Novokuznetsk env. (55.757ºN 87.148ºE), 29.VI.2011, O. Kosterin (1 ♂, ZMUM); **Khakassia**: Kubayka (52.33ºN 89.82ºE), 620 m, 10–13.VII.2017, N. Vikhrev (1 ♂, ZMUM); **Komi**: Ust-Tsilma (65.440ºN 52.153ºE), 9 and 11.VIII.1978, Gorodkov (10 ♂♂, 10 ♀♀, ZISP); Blagoevo (63.424ºN, 47.952ºE), 13.VII.1996, Gorodkov (1 ♂, ZISP); **Kursk Oblast**: Oboyan' (51.191ºN 36.312ºE), 20–21.VII.2007, A.L. Ozerov (1 ♂, ZMUM); **Leningrad Oblast**: Tolmachevo (58.856ºN 29.895ºE), 24.VIII.1961, Rudenko (1 ♂, ZISP); same place, 9.VII.1935, Rohdendorf (4 ♂♂, ZISP); Gor'kovskoe, Lake Lebyazh'e (60.312ºN 29.532ºE), 24.VIII.2003, A. Ovchinnikov (3 ♂♂, 2 ♀♀, ZISP); Luga (ca. 58.73ºN 29.84ºE), 7, 24.VII. and 19.VIII.1952, 15, 17.VI.1954, A. Stackelberg (4 ♂♂, 4 ♀♀, ZISP); Preobrazhenskay [=Tolmachovo] (58.871ºN 29.899ºE), 13.VI.1898, Pleske (1 ♀, ZISP); Rozhdestveno (59.322ºN 29.946ºE), 15, 23, 28.VI. and 1.VII.1956, A. Stackelberg (7 ♂♂, 3 ♀♀, ZISP); same place, 23.VII, 5 and 6.VIII.1957, A. Stackelberg (2 ♂♂, 3 ♀♀, ZISP); Shuvalovo (60.047ºN 30.283ºE), 1, 21 and 27.VI.1897, 16 and 21.VI.1915, Yakobson (1 ♂, 8 ♀♀, ZISP); Yashchera (58.894ºN 29.820ºE), 27.VII., 1, 2, 15 and 22.VIII.1959, 22.VII. and



Figs 51–59. *Cordilura fuscipes* (Zetterstedt) (51–53), *C. grunini* Ozerov et Krivosheina (54–56) and *C. impudica* Rondani (57–59): 51, 54, 57 — male sternite 5; 52, 55, 58 — epandrium and surstyli, lateral view; 53, 56, 59 — same, dorsal view. 54–56 — after Ozerov & Krivosheina, 2017, figs 1–3; 58 — after Ozerov & Krivosheina, 2014, fig. 13.

Рис. 51–59. *Cordilura fuscipes* (Zetterstedt) (51–53), *C. grunini* Ozerov et Krivosheina (54–56) и *C. impudica* Rondani (57–59): 51, 54, 57 — стернит 5 самца; 52, 55, 58 — эпандрий и сурстили, сбоку; 53, 56, 59 — то же, сверху. 54–56 — по Ozerov & Krivosheina, 2017, figs 1–3; 58 — по Ozerov & Krivosheina, 2014, fig. 13.

28.VIII.1960, 29.VI.1962, A. Stackelberg (6 ♂♂, 6 ♀♀, ZISP); **Moscow and Moscow Oblast**: Izmaylovo (55.786ºN 37.835ºE), 5.VII., 14.VI.1983, A.L. Ozerov (2 ♂♂, 1 ♀, ZMUM); Zelenograd (55.986ºN 37.202ºE), 3.VIII.1999, A. Gusakov (1 ♂, ZMUM); 20 km WSW of Volokolamsk (55.983ºN 35.616ºE), 13.VII.1995, A.L. Ozerov (1 ♂, ZMUM); 35 km NNE of Moscow (56.200ºN 37.833ºE), 26.VI.1993, A.L. Ozerov (5 ♂♂, 2 ♀♀, ZMUM); Andreevskoe (55.985ºN 35.620ºE), 21.VII.2006, A.L. Ozerov (1 ♂, ZMUM); Dmitrov env. (56.316ºN 37.725ºE), 19.VI., 10.VII., 19.VIII.2007, N. Vikhrev (3 ♂♂, 1 ♀, ZMUM); Mamontovka (55.999ºN 37.816ºE), 5.VI.1956, Yu. Chernov (1 ♂, ZMUM); Naro-Fominsk (55.39ºN 36.735ºE), 22.VI.2011, D. Gavryushin (1 ♂, ZMUM); Podrezkovo (55.941ºN 37.332ºE), 24.VII.1956, Yu. Chernov (1 ♂, ZMUM); Stepan'kovo (55.004ºN 35.624ºE), 9.VII.2006, 3.VI.2007, A.L. Ozerov (3 ♂♂, 2 ♀♀, ZMUM); **Murmansk Oblast**: Vud'yavr Lake Basin (ca. 67.646ºN 33.644ºE), 14.VII.1931 and 8.VII.1936, Fridolin (2 ♀♀, ZISP); **Novosibirsk**: Academgorodok (54.87ºN 83.05ºE), 18–19.VI.2016, N. Vikhrev (2 ♂♂, ZMUM); **Omsk Oblast**: Syropyatskoe (55.047ºN 73.874ºE), 32 km E of Omsk, 27.VIII.1985, Gorodkov (1 ♀, ZISP); **Pskov Oblast**: Aparino (56.958ºN 29.966ºE), 28.VI.1915, N. Kuznetsov (1 ♂, ZISP); Lake Dubets (56.966ºN 30.006ºE), 19.VI.1915, N. Kuznetsov (1 ♂, ZISP); Pokrovskoe (58.311ºN 28.960ºE), 11.VI.1915, N. Kuznetsov (1 ♂, ZISP); same place, 13.VI.1960, Nartshuk (2 ♂♂, ZISP); **Ryazan' Oblast**: Kasimov (54.94ºN 41.34ºE), 25.VII.2013, N. Vikhrev (1 ♀, ZMUM); **Smolensk Oblast**: Smolenskoe poozer'e National Park (55.511ºN 31.839ºE), 30.VI.1992, Zlobin (1 ♂, ZISP); **Sverdlovsk Oblast**: Polevskoy env., Zyuzel'skiy (56.486ºN 60.132ºE), 2.VII.1970, Zinov'ev (1 ♀, ZISP); **Ul'yanovsk Oblast**: Shilovka (54.052ºN 48.645ºE), 17.VI.2002, V.B. Isaeva (1 ♀, ZMUM); Yulovo (53.967ºN 46.491ºE), 16.VIII.1995, V.B. Isaeva (1 ♂, ZMUM); Chernaya Rechka (54.177ºN 49.75ºE), 25.VI.2002, V.B. Isaeva (1 ♂, ZMUM); **Vladimir Oblast**: 11 km SW of Petushki (ca. 55.860ºN 39.577ºE), 19.VII.1992, Belokobyl'skiy (1 ♂, ZISP); **Volgograd Oblast**: Kamyshin (50.099ºN 45.401ºE), 16.VII.1950, G. Viktorov (2 ♂♂, ZMUM); **Vorohezh Oblast**: Usmanskiy Bor (51.911ºN 39.562ºE), 24.VIII.1966 and16.VIII.1970, Negrobov (4 ♂♂, 2 ♀♀, ZISP); Varvarino (51.209ºN 41.719ºE), 12.VIII.1969, Dorovskaya (1 ♂, ZISP); **Yaroslavl' Oblast**: Berditsino (57.455ºN 40.107ºE), 5.VI.1906, A. Yakovlev (1 ♀, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 5.4–10.2 mm. *Head*. Frontal vitta black or dark brown, with whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial white. Gena black. Postcranium black, grey dusted. 3 orbital and 3–4 frontal setae present. Antenna black. Postpedicel approximately 2–2.5 times as long as wide, with 1–2 additional long setae external from plumose arista (Fig. 6). Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus black. *Thorax* black, greyish dusted, only scutum mostly subshining. Acrostichals absent or as 2–3 hairs, dorsocentrals 3+3 (including scapular seta), intra-alars (0–1)+(1–2), supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* subshining. Femora and tibiae of all legs black; tarsi of all legs brownish. *Wing* tinged with yellowish; veins brownish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, delicately greyish dusted. Male sternite 4 rectangular, longer than wide. Sternite 5, epandrium and surstyli as in Figs 45–47.

DISTRIBUTION. Russia: Altai, Arkhangelsk Oblast, Bashkiria, Chelyabinsk Oblast, Karelia, Kemerov Oblast, Khakassia, Komi, Kursk Oblast, Leningrad Oblast, Moscow Oblast, Murmansk Oblast, Novosibirsk, Omsk Oblast, Pskov Oblast, Ryazan' Oblast, Smolensk Oblast, Sverdlovsk Oblast, Ul'yanovsk Oblast, Vladimir Oblast, Volgograd Oblast, Vorohezh Oblast, Yaroslavl' Oblast. — Europe.

Cordilura fulvifrons Ozerov, 1997
Figs 48–50.

fulvifrons Ozerov, 1997: 1427 (*Cordilura*). Type-locality: Boitsovo (47.02ºN 134.21ºE) (Russia, Khabarovsk Krai).

REMARK. This species was known from the type-locality only.

MATERIAL EXAMINED. Khabarovsk Krai: Boitsovo 20 km N of Bikin (46.982ºN 134.324ºE), 250 m, 24–27.V.1993, C. Lange & J. Ziegler (1 paratype ♂, ZMUM); **Primorsky Krai**: Gribnoe, 10 km SE of Chernigovka (44.342ºN 132.569ºE), 21.V.1979, A. Zinoviev (1 ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Body-length 3.9–6.2 mm. *Head*. Frontal vitta yellow, matt; fronto-orbital plate black, subshining. Face, parafacial and gena pale yellow. Postcranium subshining, black. 3 orbital and 3 frontal setae present. Antenna blackish. Postpedicel approximately 1.5 times as long as wide. Arista nearly bare. Palpus blackish. *Thorax* black, delicately greyish dusted, only scutum mostly subshining. Acrostichals absent, dorsocentrals 4+3 (including scapular seta), intra-alars absent, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* shining. Femora black, fore tibia and tarsi of all legs yellow, mid and hind tibiae yellowish dorsally and black ventrally. *Wing* tinged with yellowish; veins brownish. Vein R_1 bare on apical third of dorsal surface. *Abdomen* black, delicately greyish dusted. Male sternite 4 trapezoid, wider than long. Sternite 5, epandrium and surstyli as in Figs 48–50.

Female unknown.

DISTRIBUTION. Russia: Khabarovsk Krai, Primorsky Krai.

Cordilura fuscipes (Zetterstedt, 1838)
Figs 51–53.

fuscipes Zetterstedt, 1838: 726 (*Cordylura*). Type-locality: "Lapponia Tornensi ... et ... Stensele … (Lappon, Suecica — Dalekarlia...)" (Sweden).

apicata Hendel, 1930: 4 (*Cordylura*). Type-locality: "Klutchi" (Kamchatka Krai, Russia).

nigrithorax Hendel, 1930: 5 (*Cordylura*). Type-locality: "Petropavlovsk" (Russia, Kamchatka Krai).

ochracea Hendel, 1930: 6 (*Cordylura* (*Parallelomma*)). Type-locality: "Petropavlovsk" (Russia, Kamchatka Krai).

REMARK. This species was recorded in Russia for European part without indicating specific locality by Gorodkov [1986: 16], for Murmansk Oblast by Engelmark [1999: 158, 159], for Far East by Hendel [1930: 4, 5, 6] and by Ozerov & Krivosheina [2014: 207] (including Khabarovsk Krai).

MATERIAL EXAMINED. **Altai**: Lake Manzherok (51.825ºN 85.812ºE), 10.V.2008, O. Kosterin (1 ♂, ZMUM); Seminsky Pass, River Turala, (50.99ºN 85.68ºE), 1350 m, 8–12.VII.2016, N. Vikhrev (1 ♀, ZMUM); **Arkhangelsk Oblast**: Nenetsky Nature Reserve, cordon "Bol'shoy Gusinets" (68.175ºN, 53.645ºE), 9–10.VII.2008, N.E. Vikhrev, A.L. Ozerov (4 ♂♂, 4 ♀♀, ZMUM); the lower reaches of the River Pechora (68.334ºN, 53.304ºE), 11.VII.2008, A.L. Ozerov (4 ♂♂, 2 ♀♀, ZMUM); Seyda env. (67.064ºN, 63.086ºE), 28–31.VII.2011, K. Tomkovich (3 ♂♂,

ZMUM); 73 km NW of Nar'yan-Mar (ca. 67.981ºN 51.608ºE), 3.VIII.1978, Gorodkov (1 ♂, 2 ♀♀, ZISP); 70 km N of Nar'yan-Mar (ca. 68.204ºN 53.627ºE), 18.VIII.1978, Gorodkov (1 ♂, ZISP); Velikovisochnoe (67.255ºN 52.032ºE), 18.VIII.1978, Gorodkov (1 ♀, ZISP); **Buryatia**: Barguzinskiy Nature Reserve (ca. 54.35ºN 109.51ºE), 22 and 23.VII.1965, Negrobov (2 ♂♂, ZISP); **Chukotka**: bank of the River Anadyr (64.72ºN 175.21ºE), 25.VI.–19.VII.2014, A. Barkalov (3 ♂♂, 2 ♀♀, ZMUM and ISEA); **Irkutsk Oblast**: Chersky Peak (51.528ºN 103.587ºE), 14.VII.1984, Zlobin (1 ♂, 1 ♀, ZISP); **Kamchatka Krai**: Valley of Geysers (ca. 54.43ºN 160.15ºE), 12.VIII.1985, V. Zlobin (2 ♀♀, ZISP); Apuka env. (60.443ºN 169.602ºE), 7.VIII.1959, Gorodkov (2 ♂♂, ZISP); **Khakassia**: W Sayan pass (51.717ºN 89.882ºE), 2100 m, 9–12.VII.2017, N. Vikhrev (3 ♂♂, 1 ♀, ZMUM); **Komi**: Vorkuta (67.5ºN 64.0ºE), 19–25.VII.2010, N. Vikhrev (5 ♂♂, 10 ♀♀, ZMUM); Shchel'yabozh (66.29ºN 56.45ºE), 13 and 15.VIII.1978, Gorodkov (1 ♂, ZISP); **Krasnoyarsk Krai**: Ergaki National Park (52.84ºN 93.25ºE), 1450 m, 27–29.VI.2017, N. Vikhrev (2 ♂♂, 1 ♀, ZMUM); **Magadan Oblast**: Magadan env. (59.6ºN 150.8ºE), 8.VII.1978, V. Zherikhin (1 ♂, ZMUM); **Murmansk Oblast**: Lake Vudyavr Basin (ca. 67.646ºN 33.644ºE), 16.VII.1932, Fridolin (1 ♂, ZISP); **Primorsky Krai**: Suputinsky [=Ussuriysky] Nature Reserve (ca. 43.635ºN 132.311ºE), 26.V.1962, A. Rasnitsyn, V. Sulimov (1 ♂, ZISP); **Tyumen' Oblast**: (63.818ºN 59.562ºE), 1–8.VII.2010, K. Tomkovich (5 ♂♂, 2 ♀♀, ZMUM); Sob' env. (67.07ºN 65.46ºE), 26–31.VII.2011, K. Tomkovich (3 ♂♂, ZMUM).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 4.2–6.5 mm. *Head*. Frontal vitta yellow, matt; fronto-orbital plate yellow or black, delicately greyish dusted. Face yellowish, with whitish reflection. Parafacial and gena yellow. Postcranium yellow completely or black in upper part and yellow in lower third or quarter. 3 orbital and 2–3 frontal setae present. Scapus and pedicel yellow; postpedicel blackish, but yellowish basally, approximately 1.5 times as long as wide. Arista pubescent, the longest hairs approximately equal to 1/3–1/2 width of postpedicel. Palpus yellow. *Thorax* from yellowish to black, delicately grey dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars (0–1)+(1–2), supra-alars 1+2, 1–2 postpronotals. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae or absent. *Legs* shining, yellow completely, sometimes femora darkened dorsally. *Wing* tinged with brownish; veins blackish. Vein R_1 bare on apical third of dorsal surface. *Abdomen* brownish or black, shining or delicately greyish dusted. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 51–53.

DISTRIBUTION. Russia: Altai, Arkhangelsk Oblast, Buryatia, Chukotka, Irkutsk Oblast, Kamchatka Krai, Khabarovsk Krai, Khakassia, Komi, Krasnoyarsk Krai, Magadan Oblast, Murmansk Oblast, Primorsky Krai, Tyumen' Oblast. — Europe, North America.

Cordilura grunini Ozerov et Krivosheina, 2017
Figs 54–56.

grunini Ozerov, Krivosheina, 2017: 2 (*Cordilura*). Type-locality: valley of the River Serebryanka (ca. 45.048ºN 136.635ºE) (Russia, Primorsky Krai).

REMARK. This species was known from the type-locality only.

MATERIAL EXAMINED. **Primorsky Krai**: Sikhote-Alin Nature Reserve, Blagodatnoe (44.975ºN 136.526ºE), 1–6.VI.2018, M. Sergeev (1 ♂, ZMUM); Kedrovaya Pad' Nature Reserve (43.104ºN 131.512ºE), 22.V.1983, Zlobin (1 ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Body-length 4.6 mm. *Head*. Frontal vitta brownish, with whitish reflection; fronto-orbital plate black. Face and parafacial whitish. Gena yellow, whitish dusted. Postcranium black, subshining. 2 orbital and 2–3 frontal setae present. Antenna black. Postpedicel approximately 1.5 times as long as wide. Arista black, pubescent in basal quarter (the longest hairs not longer than greatest diameter of arista) and the rest bare. Palpus blackish. *Thorax* black, scutum subshining, thoracic sclerites greyish dusted. Acrostichals setulose in two irregular rows, dorsocentrals 3+3 (including short scapular seta), intra-alars absent, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs*. Ground-colour black; all coxae and femora black, mid and hind tibiae blackish; fore tibia and all tarsi yellow. *Wing* tinged with brownish; veins brown. Vein R_1 bare on dorsal surface. *Abdomen* black, thinly greyish dusted. Male sternite 4 approximately 2 times as wide as long. Male sternite 5, epandrium and surstyli as in Figs 54–56.

Female unknown.

DISTRIBUTION. Russia: Primorsky Krai.

Cordilura impudica (Rondani, 1867)
Figs 19, 57–59.

impudica Rondani, 1867: 97 (*Cordylura*). Type-locality: "in agri parmensis planitie..." (vicinity of Parma, Italy).

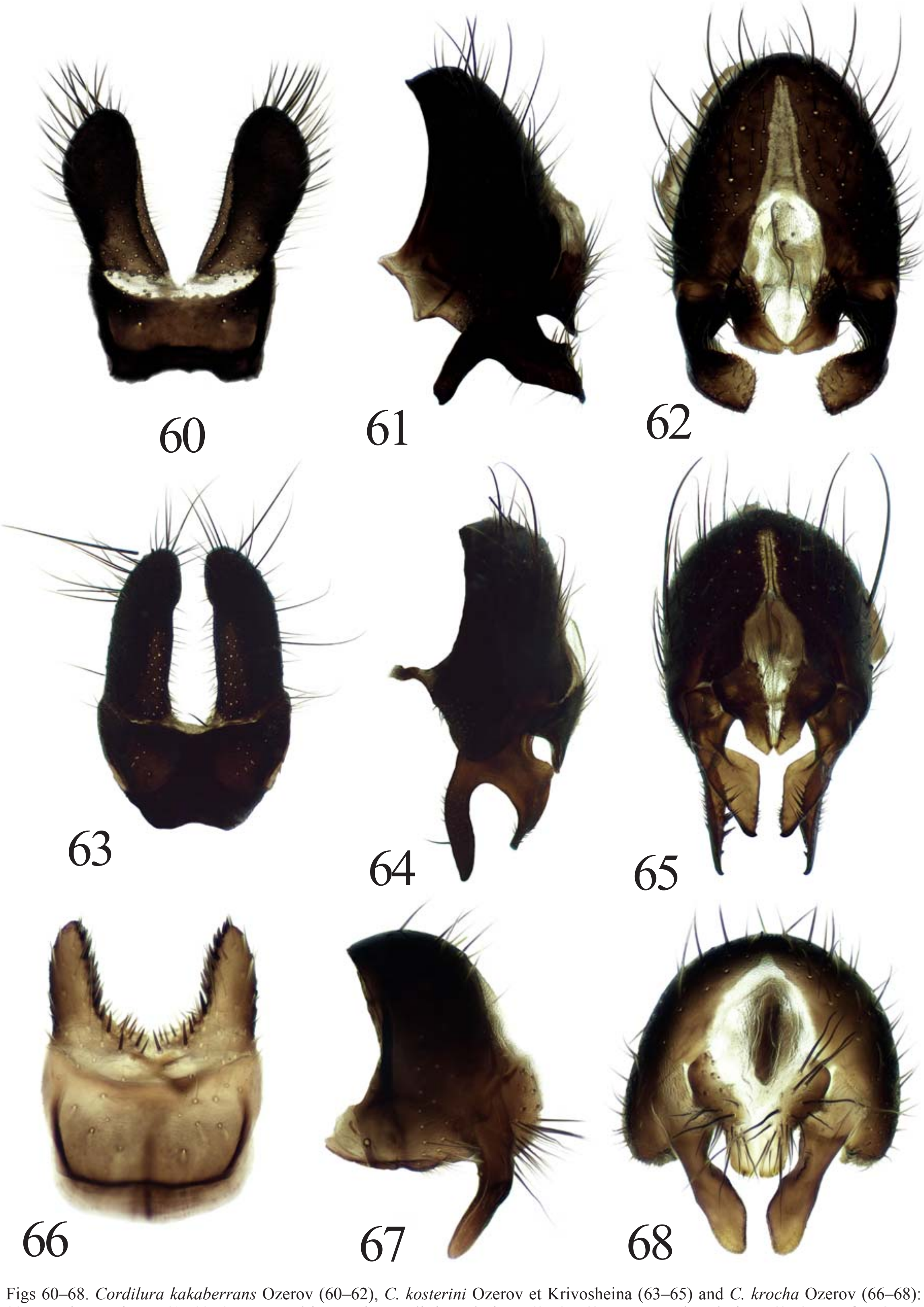
umbrosa Loew, 1873: 246 (*Cordylura*). Type-locality: "Losoncz" [Luèenec, 48.333ºN 19.666ºE] (Slovakia).

REMARKS. Noted by Gorodkov [1970: 448, 1986: 15, as *C. umbrosa*] for south of European part of Russia without indicating specific locality. Recorded by Ovchinnikov [2004: 422] from Saratov Oblast and Astrakhan' Oblast.

MATERIAL EXAMINED. **Altai**: Lake Kolyvanskoe (51.363ºN 82.191ºE), 8.IX.2007, O. Kosterin (1 ♂, ZMUM); **Astrakhan' Oblast**: Zyuzino (45.751ºN 47.678ºE), 8–9.V.2010, K. Tomkovich (1 ♂, ZMUM); Astrakhan' Nature Reserve (ca. 46.110ºN 48.749ºE), 14, 16.V. and 7.VIII.1963, Pisarev (1 ♂, 3 ♀♀, ZISP); **Bashkiria**: Beloretsk (54.051ºN 58.268ºE), 12.VIII.2012, D. Gavryushin (1 ♂, ZMUM); **Kursk Oblast**: Oboyan' (51.191ºN 36.312ºE), 25–26.V., 20–21.VII.2007, A.L. Ozerov (2 ♀♀, ZMUM); Zorino (51.172ºN 36.353ºE), 14.V.2008, K. Tomkovich (3 ♂♂, 1 ♀, ZMUM); **Mordovia**: Mordovsky Nature Reserve, Lake Inoskoe (54.728ºN, 43.15ºE), 20.V.2020, N. Vikhrev (1 ♂, ZMUM); **Moscow Oblast**: Lugovaya (56.203ºN 37.823ºE), 26.VI.1993, A.L. Ozerov (2 ♂♂, 2 ♀♀, ZMUM); **Novosibirsk** (54.854ºN 83.107ºE), 11.V.2008, 9–10.IX.2009, O. Kosterin (2 ♂♂, ZMUM); **Primorsky Krai**: Novokievsk[=Kraskino] (42.713°N 130.781°E), 8.VI.1933, A. Mishchenko (2 ♀♀, ZISP); **Sakhalin Oblast**: Sakhalin I., Moskalevo (53.567ºN 142.504ºE), 13.VIII.2001, A. Leley (1 ♀, ZMUM); **Saratov Oblast**: 5 km S of N. Bannovka (50.666ºN, 45.633ºE), 11.VII.2005, Nartshuk (1 ♂, 1 ♀, ZISP); Nizhnaya Bannovka (50.666ºN, 45.633ºE), 4–5.VII.2003, A. Ovchinnikov (9 ♂♂, 14 ♀♀, ZISP); **Zabaykalsky Krai**: 20 km E of Dauriya station (49.931ºN 116.851ºE), 6.VI.1943, Dubinin (1 ♀, ZISP).

ADDITIONAL MATERIAL EXAMINED. **Uzbekistan**: Tashkent (41.313ºN 69.286ºE), 2. IV.1929, Rohdendorf (1 ♀, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 6.0–7.6 mm. *Head*. Frontal vitta from brown to black, with whitish reflection; fronto-orbital



Figs 60–68. *Cordilura kakaberrans* Ozerov (60–62), *C. kosterini* Ozerov et Krivosheina (63–65) and *C. krocha* Ozerov (66–68): 60, 63, 66 — male sternite 5; 61, 64, 67 — epandrium and surstyli, lateral view; 62, 65, 68 — same, dorsal view. 63–65 — after Ozerov & Krivosheina, 2014, figs 10–12.

Рис. 60–68. *Cordilura kakaberrans* Ozerov (60–62), *C. kosterini* Ozerov et Krivosheina (63–65) и *C. krocha* Ozerov (66–68): 60, 63, 66 — стернит 5 самца; 61, 64, 67 — эпандрий и сурстили, сбоку; 62, 65, 68 — то же, сверху. 63–65 — по Ozerov & Krivosheina, 2014, figs 10–12.

plate black, greyish dusted. Face and parafacial yellowish with whitish reflection. Gena blackish. Postcranium black, grey dusted. 3 orbital and 2–3 frontal setae present. Antenna black. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus black. *Thorax* black, delicately grey dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars (0–1)+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae or absent. *Legs* greyish dusted. Fore coxa black. Femora of all legs black. Tibiae and tarsi of all legs yellow. *Wing* tinged with brownish; veins blackish. Vein R_1 setulose on apical third of dorsal surface (Fig. 19). *Abdomen* black, delicately grey dusted. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 57–59.

Description, figures and photo of female ovipositor is given by Ovchinnikov [2009: 624–625, 630, as *Cordilura umbrosa*].

DISTRIBUTION. Russia: Altai, Bashkiria, Kursk Oblast, Mordovia, Moscow Oblast, Novosibirsk Oblast, Primorsky Krai, Sakhalin Oblast, Saratov Oblast, Zabaykalsky Krai. — Europe, Kazakhstan [Gorodkov, 1986: 15], Uzbekistan (**first record**).

Cordilura kakaberrans Ozerov, 1997
Figs 60–62.

kakaberrans Ozerov, 1997: 1424 (*Cordilura*). Type-locality: 40 km SE of Ussuriysk (Russia, Primorsky Krai).

REMARK. Recorded in Russia from Khabarovsk Krai and Primorsky Krai [Ozerov, Krivosheina, 2014: 207].

MATERIAL EXAMINED. **Primorsky Krai**: Kamenushka (43.634ºN 132.222ºE), 29.VII.1983,7.VI.1985, A.L. Ozerov (3 ♂♂, 3 ♀♀, ZMUM); Ryazanovka (42.797ºN 131.244ºE), 10.VI.1989, A. Shatalkin (1 ♂, ZMUM); Udegeyskaya Legenda National Park (45.766ºN 135.465ºE), 23.VII.2009, A. Ovchinnikov (1 ♀, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 5.2–7.4 mm. *Head*. Frontal vitta from reddish yellow to blackish, with whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial yellowish with whitish reflection. Gena yellow or brownish. Postcranium black, grey dusted. 2 orbital and 2–3 frontal setae present. Scapus and pedicel brownish; postpedicel blackish, approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus black or dark brown. *Thorax* black, grey dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars absent, supra-alars (0–1)+2, 2 postpronotals. Scutellum with a pair of strong discal setae and a pair of apical scutellar setulae. *Legs* greyish dusted. Fore coxa black; femora black; tibia and tarsus of fore leg yellow; tibiae and tarsi of mid and hind legs from brownish to black. *Wing* tinged with brownish; veins blackish. Vein R_1 bare on apical third of dorsal surface. *Abdomen* black, delicately grey dusted. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 60–62.

DISTRIBUTION. Russia: Khabarovsk Krai, Primorsky Krai.

Cordilura kosterini Ozerov et Krivosheina, 2014
Figs 63–65.

kosterini Ozerov, Krivosheina, 2014: 207 (*Cordilura*). Type-locality: Lotos Lake (42.46ºN 130.64ºE) (Russia, Primorsky Krai).

REMARKS. This species is known from the type-locality only. A single male was collected on leaves of *Nelumbo nucifera* Gaertner, 1788 (Nelumbonaceae).

DIAGNOSTIC DESCRIPTION. Male. Body-length 6.6 mm. *Head*. Frontal vitta black, matt; fronto-orbital plate black, subshining. Face and parafacial yellow with whitish reflection. Gena blackish. Postcranium black, greyish dusted. 3 orbital and 3 frontal setae present. Antenna black. Postpedicel approximately 2 times as long as wide. Arista pubescent, the longest hairs approximately equal to 1/2 width of postpedicel. Palpus black. *Thorax* black, greyish dusted. Acrostichals absent, dorsocentrals 3+3 (including scapular seta), intra-alars 1+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae. *Legs* greyish dusted. Femora of all legs black; tibiae and tarsi of all legs yellow, only hind tibia darkened dorsally. *Wing* tinged with brownish; veins brownish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, grey dusted. Male sternite 4 rectangular, longer than wide. Sternite 5, epandrium and surstyli as in Figs 63–65.

Female unknown.

DISTRIBUTION. Russia: Primorsky Krai.

Cordilura krocha Ozerov, 2007
Figs 66–68.

krocha Ozerov, 2007b: 123 (*Cordilura*). Type-locality: Zeya Town (Russia, Amur Oblast).

REMARK. The species was recorded in Russia from Amur Oblast only.

MATERIAL EXAMINED. **Amur Oblast**: Zeya Town (53.748ºN 127.261ºE), 3 and 17.VIII.1982, A. Shatalkin (2 ♂♂, ZMUM); Zeysky Nature Reserve, cordon "52 km" (54.087ºN 126.871ºE), 13–14.VIII.1981, A. Ozerov, O. Gorbunov, A. Shatalkin (8 ♂♂, 1 ♀, ZMUM).

DIAGNOSTIC DESCRIPTION. Male, female. Body-length 3.6–4.0 mm. *Head*. Frontal vitta black or blackish in upper half and reddish-yellow in lower half; fronto-orbital plate blackish, greyish dusted. Face, parafacial and gena yellowish white. Postcranium blackish in upper half and yellow-whitish in lower half, greyish dusted. 2 orbital and 2 frontal setae present. Antenna yellow, postpedicel darkened in lower half. Postpedicel approximately 2 times as long as wide. Arista nearly bare. Palpus pale yellow. *Thorax* greyish dusted; completely yellow in female; scutum and mediotergite black, pleural sclerites dark, but lighter in lower part in male. Acrostichals setulose in two rows or absent, dorsocentrals 3+3 (including scapular seta), intra-alars (0–1)+0, supra-alars 1+2, 1 strong postpronotal. Scutellum with a pair of strong discal setae only.

Legs yellow; tarsomere 5 of hind leg dark brownish in male; all tarsi yellow in female. *Wing* tinged with light brownish; veins brownish. Vein R_1 bare on apical third of dorsal surface. *Abdomen* blackish greyish dusted; tergites 5 and 6 shining in female. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 66–68.

DISTRIBUTION. Russia: Amur Oblast.

Cordilura monochroma Ozerov et Krivosheina, 2014
Figs 10, 69–71.

monochroma Ozerov, Krivosheina, 2014: 209 (*Cordilura*). Type-locality: Yuzhno-Kurilsk (43.026ºN 145.862ºE) (Russia, Sakhalin Oblast).

REMARK. This species was described on material from Sakhalin Oblast and Primorsky Krai [Ozerov, Krivosheina, 2014: 209].

MATERIAL EXAMINED. **Amur Oblast**: Klimoutsy (51.470ºN 127.599ºE), 22 and 30.V.1958, 31.V. and 17.VI.1959, Zinov'ev (3 ♂♂, 1 ♀, ZISP); **Buryatia**: Selenduma (50.916ºN 106.239ºE), 25.VI.1971, V. Richter (3 ♂♂, 1 ♀, ZISP); **Khabarovsk Krai**: Lake Sindinskoe (48.92ºN 136.24ºE), 7.VI.2014, N. Vikhrev (2 ♀♀, ZMUM); **Primorsky Krai**: Terney (45.052ºN 136.609ºE), 26.VI.1937, Grunin (1 ♂, ZISP); Khasan (42.43ºN 130.647ºE), 25.V.1979, A. Zinov'ev (1 ♂, ZISP); same place, 12.VII.1962, Nartshuk (1 ♀, ZISP); Sikhote-Alin Nature Reserve, Blagodatnoe (44.975ºN 136.526ºE), 1–6.VI.2018, M. Sergeev (1 ♂, ZMUM); 40 km SE of Ussuriysk, Ussuriysky Nature Reserve (43.634ºN 132.222ºE), 26.V.1985, A. Ozerov (1 ♀, ZMUM); Santakheza [now=Novosel'skoe] (44.773ºN 132.698ºE), 6.VI.1971, Pinskaya (1 ♂, ZISP); **Sakhalin Oblast**: Kunashir I., Kurilskiy Nature Reserve, cordon Andreevskiy (43.54ºN 145.37ºE), 6–8.VII.2014, I.A. Gomyranov (1 ♂, ZMUM); Kunashir I., Alekhino (43.955ºN 145.5927ºE), 15.VI.1973, Kerzhner (1 ♂, ZISP); Kunashir I., Sernovodsk (43.912ºN 145.641ºE), 30.VI.1968, Nartshuk (2 ♂♂, 1 ♀, ZISP); same place, 6.VII.1973, Kerzhner (1 ♂, ZISP); same place, 6.VII.1973, V. Richter (8 ♂♂, 5 ♀♀, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 6.3–8.1 mm. *Head*. Frontal vitta reddish, with silver reflection; fronto-orbital plate black, whitish dusted. Face and parafacial yellow, with silver reflection. Gena from yellow to black. Postcranium black, whitish dusted. 3 orbital and 3–4 frontal setae present. Antenna black. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus black. *Thorax* black, whitish dusted. Acrostichals setulose usually in two rows (1–3 pairs of presutural and 0–1 pair of postsutural (prescutellar)), dorsocentrals 3+3 (including scapular seta), intra-alars 1+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs*. Coxae and fore femora of all legs black; fore and mid tibiae yellow, hind tibia from yellow to black; tarsi of all legs brownish or blackish, ventral surface of fore tarsus uniformly brownish (Fig. 14). *Wing* tinged with brownish; veins brown. Vein R_1 bare on apical third of dorsal surface. *Abdomen* black in ground colour. Tergites greyish dusted. Male sternite 4 trapezoid, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 69–71.

DISTRIBUTION. Russia: Amur Oblast, Buryatia, Khabarovsk Krai, Primorsky Krai, Sakhalin Oblast.

Cordilura nartshukae Ozerov et Krivosheina, 2015
Fig. 18.

nartshukae Ozerov, Krivosheina, 2015: 489 (*Cordilura*). Type-locality: riverhead of the River Chapingou [=Krounovka], tributary of the River Shufan [=Borisovka] (ca. 43.615ºN 131.541ºE) (Russia, Primorsky Krai).

REMARK. The species is known from the type-locality only.

DIAGNOSTIC DESCRIPTION. Female. Body-length 7.2 mm. *Head*. Frontal vitta and fronto-orbital plate yellow, whitish dusted. Face and parafacial yellow with whitish reflections. Gena and postcranium yellow. 1–2 orbital and 4–5 frontal setae present. Antenna yellow. Postpedicel approximately 2.5 times as long as wide. Arista yellow, pubescent, the longest hairs approximately equal to 1/3–1/2 width of postpedicel. Palpus yellow. *Thorax* yellow, thinly greyish dusted. Acrostichals setulose in two irregular rows, dorsocentrals 3+3 (including scapular seta), intra-alars 0+1, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae and a pair of apical setulae. *Legs* completely yellow. *Wing* (Fig. 18) tinged with brownish; veins pale brown. Vein R_{2+3} with a brown spot apically. Intersection of vein M and crossvein dm-cu with a brown spot. Apex of wing darkened. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* brownish, thinly greyish dusted.

Male unknown.

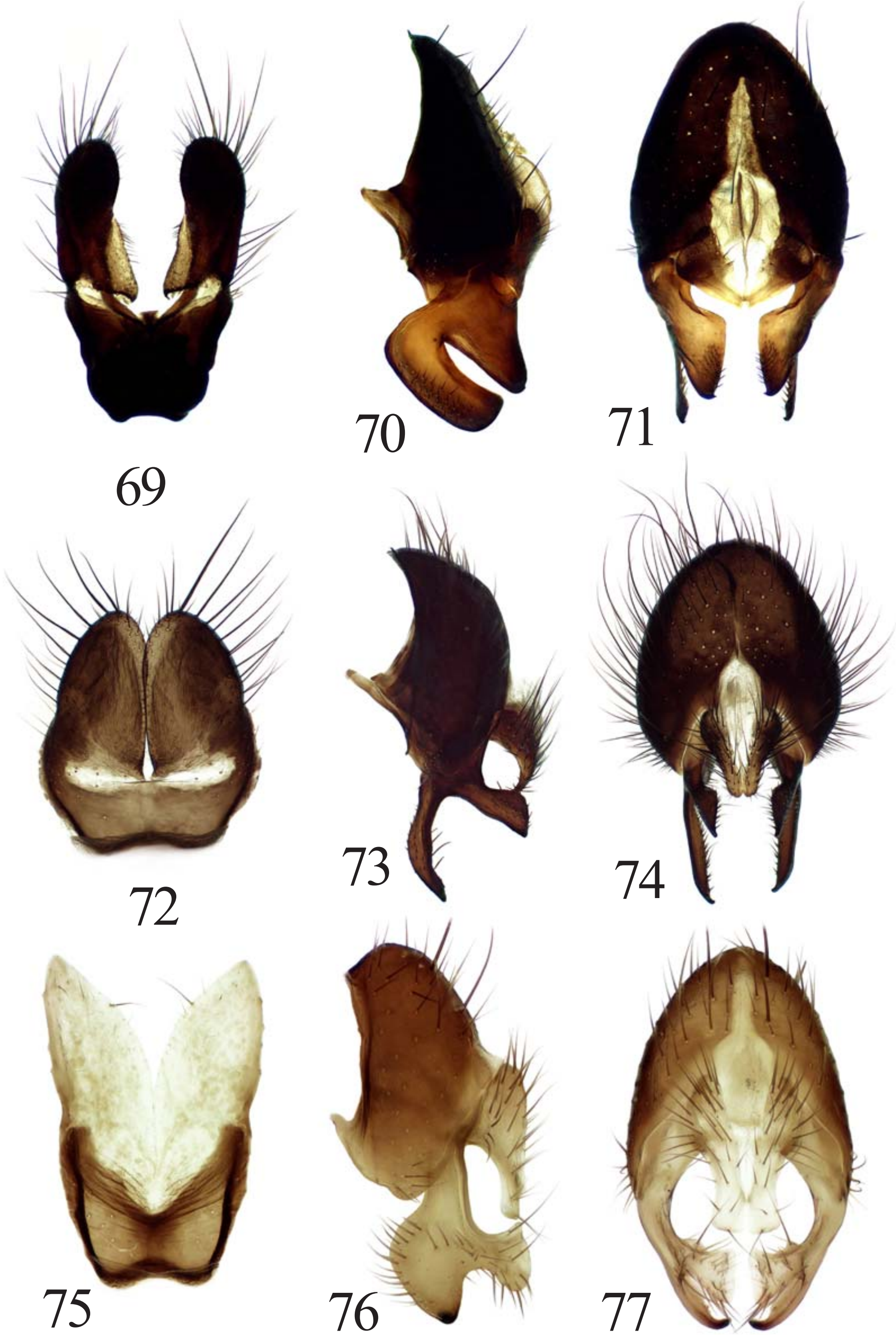
DISTRIBUTION. Russia: Primorsky Krai.

Cordilura negrobovi Ozerov et Krivosheina, 2017
Figs 72–74.

negrobovi Ozerov, Krivosheina, 2017: 4 (*Cordilura*). Type-locality: Tagarhay (51.878ºN 102.392ºE) (Russia, Buryatia).

REMARK. This species is known from the type-locality only.

DIAGNOSTIC DESCRIPTION. Male. Body-length 6.7 mm. *Head*. Frontal vitta black, in upper third brownish; fronto-orbital plate black, whitish dusted. Face and parafacial white. Gena and postgena brownish. Postcranium black. 2 orbital and 4 frontal setae present. Antenna brownish. Postpedicel approximately 2 times as long as wide. Arista yellow, pubescent or plumose, the longest hairs approximately equal to 1/2–3/4 width of postpedicel. Palpus yellow. *Thorax* black. Scutum and scutellum shining; anepisternum shining, but along anterior margin greyish dusted; anepimeron shining completely; mediotergite shining along border with abdomen; the rest parts of thorax greyish dusted. Acrostichals absent, dorsocentrals 3+3 (including scapular seta), intra-alars absent, supra-alars 0+2, 1 postpronotal. Scutellum with a pair of strong discal setae. *Legs*. Fore coxa yellow, mid and hind coxae blackish. Femora of all legs black. Fore tibia and tarsi of all legs yellow. Mid and hind tibiae brownish. *Wing* tinged with brownish; veins brown. Vein R_1 bare on dorsal surface. *Abdomen* black, thinly greyish dusted. Male sternite 4 approximately 2 times as long as wide. Sternite 5 with long wide lobes (Fig. 72). Surstyli bifurcate (Figs 73, 74).



Figs 69–77. *Cordilura monochroma* Ozerov et Krivosheina (69–71), *C. negrobovi* Ozerov et Krivosheina (72–74) and *C. nubecula* Sasakawa (75–77): 69, 72, 75 — male sternite 5; 70, 73, 76 — epandrium and surstyli, lateral view; 71, 74, 77 — same, dorsal view. 69–71 — after Ozerov & Krivosheina, 2014, figs 16, 18, 19; 72–74 — after Ozerov & Krivosheina, 2017, figs 7–9; 75–77 — after Ozerov & Krivosheina, 2012b, figs 5, 7, 8.

Рис. 69–77. *Cordilura monochroma* Ozerov et Krivosheina (69–71), *C. negrobovi* Ozerov et Krivosheina (72–74) и *C. nubecula* Sasakawa (75–77): 69, 72, 75 — стернит 5 самца; 70, 73, 76 — эпандрий и сурстили, сбоку; 71, 74, 77 — то же, сверху. 69–71 — по Ozerov & Krivosheina, 2014, figs 16, 18, 19; 72–74 — по Ozerov & Krivosheina, 2017, figs 7–9; 75–77 — по Ozerov & Krivosheina, 2012b, figs 5, 7, 8.

Female unknown.

DISTRIBUTION. Russia: Buryatia.

Cordilura nubecula Sasakawa, 1986
Figs 75–77.

nubecula Sasakawa, 1986: 43 (*Cordilura*). Type-locality: Utukusigahara (Japan, Nagano Pref.).

REMARK. The species was firstly registered in Russia by Ozerov & Krivosheina [2012b: 4] from Khabarovsk Krai, and after also included in list of *Cordilura* species of Far East of Russia [Ozerov, Krivosheina, 2014: 211].

MATERIAL EXAMINED. **Khabarovsk Krai**: Boitsovo 20 km N of Bikin (46.982ºN 134.324ºE), 250 m, 24–27.V.1993, C. Lange & J. Ziegler (1 ♂, ZMUM).

DIAGNOSTIC DESCRIPTION. Male. Body-length 6.2–7.3 mm [Sasakawa, 1986: 44; Iwasa, 2020: 477]. *Head*. Frontal vitta and fronto-orbital plate yellow. Face, parafacial and gena yellowish, with weak whitish reflection. Postcranium yellow in lower part and black in upper half. 2 orbital and 2–3 frontal setae present. Antenna pale yellow. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus yellow. *Thorax* yellow in ground colour, but scutum black completely, anepimeron, katatergite and mediotergite blackish. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars 1+(0–1), supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae. *Legs* shining, yellow. *Wing* tinged with brownish, with a distinct brown spot apically; veins blackish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, subshining. Sternite 4 trapezoid, slightly longer than wide. Sternite 5, epandrium and surstyli as in Figs 75–77.

Female. Not studied.

DISTRIBUTION. Russia: Khabarovsk Krai. — Japan [Sasakawa, 1986: 43; Iwasa, 2020: 477].

Cordilura nubilosa Ozerov et Krivosheina, **sp.n.**
Figs 78–80.

MATERIAL EXAMINED. Holotype ♂, Russia: **Primorsky Krai**: Sikhote-Alin', the top of the Mt. Oblachnaya (43.695ºN 134.199ºE), 3.VII.1962, Kovalev (ZISP).

DESCRIPTION. Male. Length of body 4.2 mm. Length of wing 4.8 mm.

Head. Frontal vitta and fronto-orbital plate reddish, thinly whitish dusted. Ocellar triangle black. Face, parafacial and gena yellow with whitish reflections. Postcranium black in upper part and yellow in lower third. Setae: 2 orbitals, 2 frontals, 1 ocellar, 1 long inner vertical, 1 outer vertical (approximately 0.5 times as long as inner vertical), 1 postocellar; 1 pair of strong vibrissae present. Scapus and pedicel yellowish. Postpedicel blackish, rounded apically, approximately 2.5 times as long as wide. Arista nearly bare, longest hairs not exceeding greatest diameter of arista. Palpus yellow with a thin apical seta.

Thorax thinly greyish dusted, blackish, only katepisternum and meron yellow. Acrostichals setulose in two rows, dorsocentrals 3+1 (including scapular seta), intra-alars 0+1, supra-alars 1+2, 1 postpronotal, 2 notopleurals, 2 postalars. Proepisternum covered with fine hairs and with 1 seta near ventral margin. Proepimeron with 1–2 setae ventral to spiracle. Anepisternum with a few hairs in posterior half and 2 black setae near posterior margin. Katepisternum with yellow hairs in ventral corner and 1 strong long black seta in posterodorsal corner. Anepimeron bare. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae.

Legs completely yellow. Fore femur with rows of dorsal and posteroventral setae. Fore tibia with 2 posterodorsal, 2 anterodorsal, 2 posteroventral, 1 dorsal preapical and 1 posterior apical setae. Mid femur with a row of anterior setae and with 1 posterior apical seta. Mid tibia with 2 anterodorsal, 2 posterodorsal, 1 anteroventral setae, and with a ring of apicals. Hind femur with a row of anterodorsal setae and 2 anteroventral setae in apical third. Hind tibia with 1 posterodorsal, 2 anterodorsal, 1 anteroventral, 1 dorsal preapical, and 1 apical anteroventral setae.

Wing tinged with yellowish; veins pale brown. Vein R_1 setulose on apical third of dorsal surface. Calypters, margins of calypters, and halteres yellowish.

Abdomen blackish, thinly greyish dusted. Syntergite 1+2 with 3–4 lateral discal and with a row of marginal setae; tergites 3–6 each with a row of marginal setae. Sternite 4 rectangular, approximately as long as wide. Sternite 5, epandrium and surstyli as in Figs 78–80.

Female unknown.

COMPARISON. New species is closely related to East Palaearctic species *C. amurensis* Ozerov, 2007, but is distinguished from this species by colour of scutum and structure of surstyli. *C. amurensis* has scutum of thorax reddish yellow and longer surstyli (Fig. 38), undoubtedly curved in median part (Fig. 37). New species has scutum of thorax blackish and surstyli shorter and straight (Figs 79, 80).

DISTRIBUTION**.** Russia: Primorsky Krai.

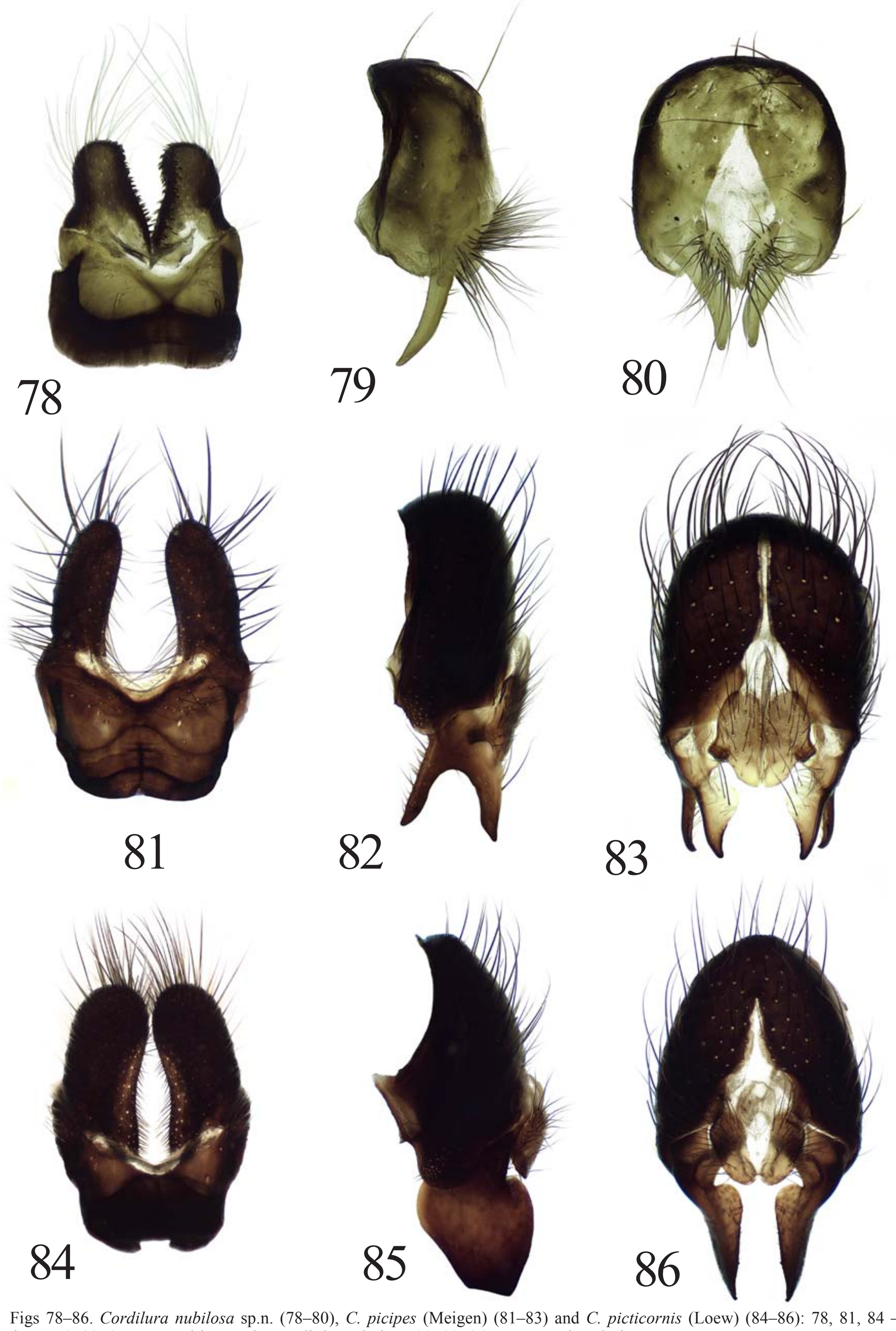
Cordilura picipes (Meigen, 1826)
Figs 2, 81–83.

picipes Meigen, 1826: 232 (*Cordylura*). Type-locality: not given.

biseta Loew, 1864: 21 (*Cordylura*). Type-localities: "Dänemark, ganz Deutschland" (Denmark, Germany).

REMARKS. Recorded by Gorodkov [1986: 14] for Leningard Oblast and for central and south parts of European Russia, but without indicating specific locality. Šifner [2008: 120] recorded this species from Moscow Oblast, Humala & Polevoi [2009: 71] from Karelia and Ovchinnikov [2004: 421] from Yaroslavl' Oblast.

MATERIAL EXAMINED. **Altay**: Artybash env. (51.796ºN 87.265ºE), 16–18.VII.2006, Nartshuk (2 ♀♀, ZISP); **Karelia**: Kizhi (62.084ºN 35.211ºE), 19.VI.1979, Gorodkov (4 ♂♂, 2 ♀♀, ZISP); **Kursk Oblast**: Oboyan' (51.191ºN 36.312ºE), 26.V. 2007, N.



Figs 78–86. *Cordilura nubilosa* sp.n. (78–80), *C. picipes* (Meigen) (81–83) and *C. picticornis* (Loew) (84–86): 78, 81, 84 — male sternite 5; 79, 82, 85 — epandrium and surstyli, lateral view; 80, 83, 86 — same, dorsal view.

Рис. 78–86. *Cordilura nubilosa* sp.n. (78–80), *C. picipes* (Meigen) (81–83) и *C. picticornis* (Loew) (84–86): 78, 81, 84 — стернит 5 самца; 79, 82, 85 — эпандрий и сурстили, сбоку; 80, 83, 86 — то же, сверху.

Vikhrev (1 ♀, ZMUM); **Leningrad Oblast**: Yashchera (58.894ºN 29.820ºE), 23.VII.1957, A. Stackelberg (2 ♀♀, ZISP); Lake Lebyazh'e (60.312ºN 29.532ºE), 29.V.1899, Bianki (1 ♂, ZISP); same place, 20.V.1899, Bezval' (1 ♀, ZISP); **Mordovia**: Mordovsky Nature Reserve, River Pushta (54.75ºN, 43.20ºE), 21.V.2020, N. Vikhrev (1 ♂, ZMUM); **Moscow and Moscow Oblast**: Izmaylovo (55.786ºN 37.835ºE), 15.V.1983, A.L. Ozerov (1 ♂, ZMUM); Andreevskoe (55.974ºN 35.603ºE), 27.VI.2007, A.L. Ozerov (1 ♂, 2 ♀♀, ZMUM); Golitsyno (55.649ºN 37.011ºE), 27.VI.1978, A. Shatalkin (2 ♂♂, 3 ♀♀, ZMUM); Dmitrov env. (56.316ºN 37.725ºE), 19.V.2006, 10–15.V., 17 and 28.VI.2007, 5 and 9.V.2008, N. Vikhrev (5 ♂♂, 3 ♀♀, ZMUM); Zosimova Pustyn' (55.412ºN 36.814ºE), 17.V.2008, D. Gavryushin (1 ♂, ZMUM); Lugovaya (56.203ºN 37.823ºE), 26.VI.1993, A.L. Ozerov (1 ♀, ZMUM); Naro-Fominsk (55.357ºN 36.736ºE), 13 and 16.V.2006, D. Gavryushin (3 ♂♂, 1 ♀, ZMUM); Ozhigovo (55.453ºN 36.884ºE), 22.VII.2007, 10.V.2008, 10.VIII.2009, D. Gavryushin (1 ♂, 3 ♀♀, ZMUM); Smolevo (55.578ºN 38.666ºE), 6–7.VI.2011, K. Tomkovich (1 ♂, ZMUM); Stepan'kovo (55.004ºN 35.624ºE), 8.VII.2006, 3.VI.2007, A.L. Ozerov (5 ♂♂, 1 ♀, ZMUM); Yur'evo (56.006ºN 35.546ºE), 9.VIII.2007, 29.VII.2009, A.L. Ozerov (2 ♂♂, ZMUM); Yakshino env. (55.920ºN 35.573ºE), 15.V.2015, A.L. Ozerov (1 ♂, 1 ♀, ZMUM); Snegiri (55.887ºN 37.028ºE), 26.V.1984, Gorodkov (2 ♂♂, 2 ♀♀, ZISP); **Novgorod Oblast**: Ramen'e (58.374ºN 33.430ºE), Okulovka env., 4.VI.1988, Gorodkov (2 ♂♂, 1 ♀, ZISP); **Vorohezh Oblast**: Usmansky Bor (51.911ºN 39.562ºE), 15.VII.1968, Negrobov (1 ♀, ZISP); **Yaroslavl' Oblast**: Berditsino (57.455ºN 40.107ºE), 13.VI.1906, 20.V. and 29.VI.1907, A. Yakovlev ((3 ♂♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female (Fig. 2). Body-length 4.5–6.4 mm. *Head*. Frontal vitta dark brown or black, with whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial yellowish with whitish reflection. Gena blackish. Postcranium black, grey dusted. 3 orbital and 2 frontal setae present. Antenna black. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus black. *Thorax* black, delicately grey dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including small scapular seta), intra-alars (0–1)+(1–2), supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae or absent. *Legs* greyish dusted. Fore coxa black. Femora and tibiae of all legs black. Tarsi of all legs brownish or black. *Wing* tinged with brownish; veins blackish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, delicately grey dusted. Male sternite 4 rectangular, wider than long. Male sternite 5, epandrium and surstyli as in Figs 81–83.

DISTRIBUTION. Russia: Altay, Karelia, Kursk Oblast, Leningrad Oblast, Mordovia, Moscow Oblast, Novgorod Oblast, Vorohezh Oblast, Yaroslavl' Oblast. — Europe, Mongolia [Gorodkov, 1986: 14].

Cordilura picticornis (Loew, 1864)
Figs 84–86.

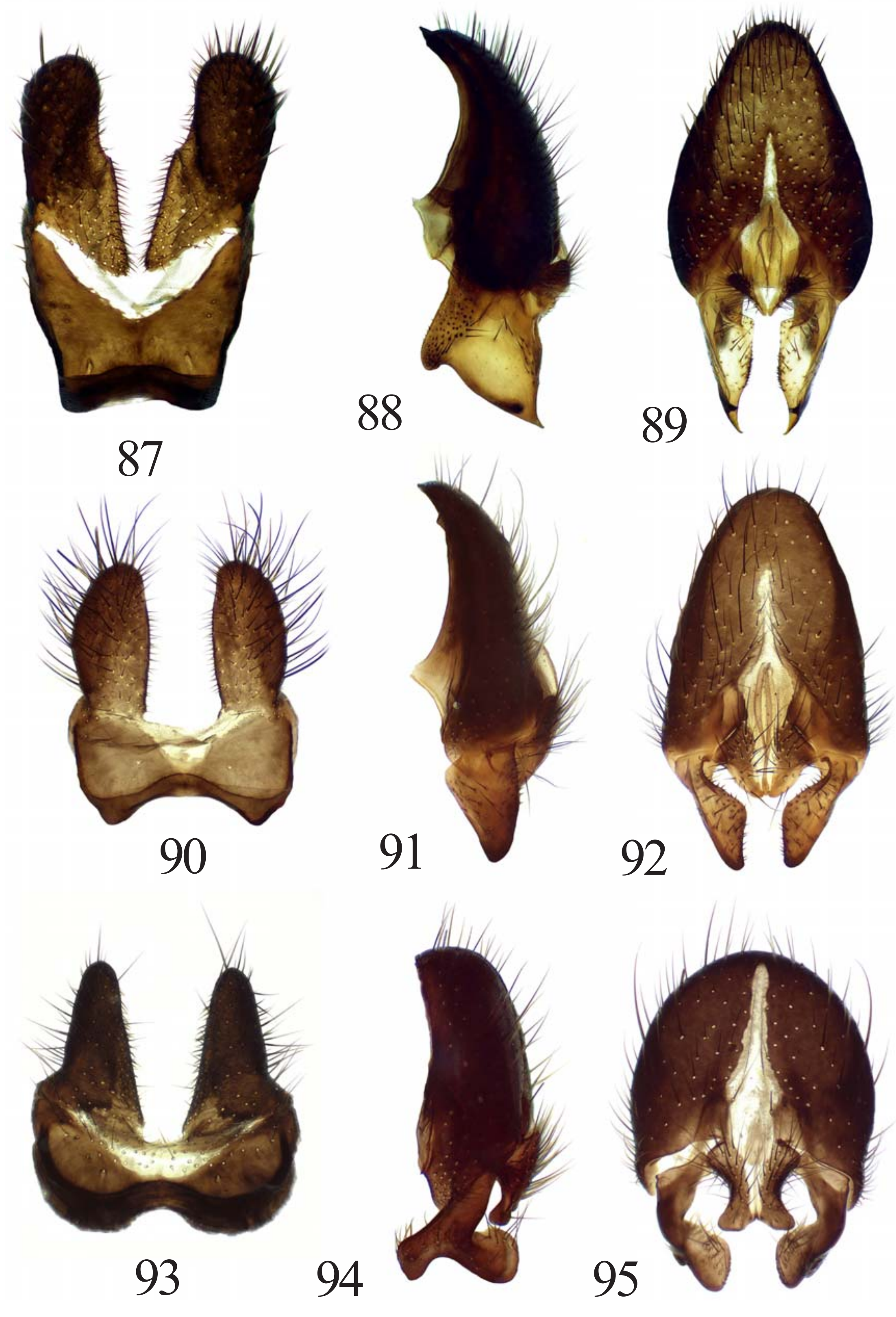
picticornis Loew, 1864: 22 (*Cordylura*). Type-locality: "Sibiria" (Russia).

latigenis Hendel, 1930: 3 (*Cordylura*). Type-locality: "Petropavlovsk" (Russia, Kamchatka Krai).

REMARKS. The species was described by Loew [1864: 22] from Siberia without indicating a specific locality, after registered for Russia by Hendel [1930: 3, as *C. latigenis*] from Kamchatka Krai. Noted by Gorodkov [1970: 448] from Kola Peninsula and Polar Ural, also from Siberia and Far East, but without indicating specific locality [Gorodkov, 1986: 15]. Registered from Chukotka and Magadan Oblast [Ozerov, Krivosheina, 2014: 211] and from Yakutia [Bagachanova *et al.*, 2016: 779].

MATERIAL EXAMINED. **Altai**: Kosh-Agach, plato Ukok, 2450 m, Lake Muzdy-Bulak (49.3ºN 87.65ºE), 8.VII.2008, A. Barkalov (9 ♂♂, 2 ♀♀, ISEA and ZMUM); the source of the River Naryn-Gol from Lake Kindyktykul', 2477 m, (49.83ºN, 89.44ºE), 19.VII.2009, A. Barkalov (3 ♂♂, 1 ♀, ISEA); Kuray env. (50.233ºN 87.930ºE), 22–24.VII.2006, A. Ovchinnikov (1 ♂, ZISP); Kosh-Agach (49.997ºN 88.670ºE), 24.VI. and 31.VII.1964, Nartshuk (2 ♂♂, ZISP); **Arkhangelsk Oblast**: Nar'yan-Mar (67.627ºN, 53.000ºE), 7.VII.2008, A.L. Ozerov (2 ♂♂, 4 ♀♀, ZMUM); Nar'yan-Mar (67.636ºN 53.031ºE), 2 and 20.VIII.1978, Gorodkov (17 ♂♂, 14 ♀♀, ZISP); Nenetsky Nature Reserve, cordon "Bol'shoy Gusinets" (68.175ºN, 53.645ºE), 10.VII.2008, A.L. Ozerov, N. Vikhrev (3 ♂♂, ZMUM); the lower reaches of the River Pechora, Kashin I. (68.242ºN, 53.856ºE), 10.VII.2008, A.L. Ozerov (3 ♂♂, 1 ♀, ZMUM); the lower reaches of the River Pechora (68.334ºN 53.304ºE), 11.VII.2008, A.L. Ozerov (1 ♀, ZMUM); Karpogory (ca. 64ºN 44.45ºE), River Pinega, 10.VII.1996, Gorodkov (2 ♀♀, ZISP); Nizhnyaya Pesha (66.751°N 47.760°E), 23.VII., 2 and 22.VIII.1978, Gorodkov (2 ♂♂, 4 ♀♀, ZISP); **Chukotka**: bank of the River Anadyr (64.72ºN 175.21ºE), 25.VI.–19.VII.2014, A. Barkalov (2 ♀♀, ZMUM); **Kamchatka Krai**: Uzon (54.503ºN 159.99ºE, 54.487ºN 159.977ºE), 16 and 17.VII., 1.VIII.1977, Stenchenko (1 ♂, 2 ♀♀, ZMUM), same place, 11.VII.1987, 20.VII.2009, L. Lobkova (2 ♂♂, 2 ♀♀, ZMUM); Valley of Geysers (ca. 54.43ºN 160.15ºE), 12.VIII.1985, V. Zlobin (1 ♂, 1 ♀, ZISP); Lake Nerpich'e (ca. 56.326ºN 162.684ºE), Khalmychensky Cape, 10.VII.1909, Derzhavin (3 ♂♂, ZISP); Ust'-Kamchatsk (56.229ºN 162.469ºE), 15.VII.1909, A. Derzhavin (1 ♂, ZISP); Korf (60.376ºN 166.023ºE), 29.VI.1959, Gorodkov (1 ♂, ZISP); Lake Kultuchnoe (53.03ºN, 158.64ºE), 5–9.VII.2020, F. Martynovchenko (1 ♂, ZMUM); **Karelia**: Primorskiy (66.546ºN 33.103ºE), 4–6.VII.2010, A.L. Ozerov (1 ♂, 6 ♀♀, ZMUM); **Khabarovsk Krai**: Shantarskie Islands (ca. 54.922ºN 137.683ºE), 28.VII.1911, V.K. Soldatov (1 ♂, ZISP); **Komi**: Shchel'yabozh (66.29ºN 56.45ºE), 14.VIII.1978, Gorodkov (1 ♂, 4 ♀♀, ZISP); 3 km N of Ust-Tsilma (ca. 65.45ºN 52.11ºE), Roshchinskiy, 10.VIII.1978, Gorodkov (2 ♀♀, ZISP); Ust-Tsilma (65.440ºN 52.153ºE), 9.VIII.1978, Gorodkov (1 ♀, ZISP); **Krasnoyarsk Krai**: Igarka (67.457ºN 86.598ºE), River Yenisei, 30.VI.1967, Gorodkov (1 ♀, ZISP); **Magadan Oblast**: (59.568ºN 150.809ºE), 27.VII.1963, Zhelokhovtsev (1 ♀, ZMUM); 30 km W of Magadan Town (59.683ºN 150.333ºE), 28.VI.2017, V. Sorokina (1 ♀, ISEA); Koni peninsula, Plosky Cape (59.161ºN 151.643ºE), 3.VII.2016 and 7.VII.2017, N. Tridrich (2 ♂♂, ZMUM); **Sakhalin Oblast**: Paramushir I., Severo-Kuril'sk (50.679ºN 156.132ºE), 5.IX.1968, Gorodkov (1 ♂, ZISP); Sakhalin I., Nadezhda Bay (ca. 49.273ºN 142.074ºE), 9.VII.1908, Soldatov (1 ♂, ZISP); **Tyumen' Oblast**: Shapsha env. (61.085ºN 69.458ºE), 14–16.VII.2010, K. Tomkovich (1 ♀, ZMUM); Gaz-sale (67.364ºN 78.998ºE), 18 km SE of Tazovskoe, 31.VII.1977, Gorodkov (1 ♂, 1 ♀, ZISP); **Yakutia**: the mouth of the River Vilyuy (64.285ºN 126.386ºE), 8–16.VI.1875, Chekanovskiy (3 ♂♂, 1 ♀, ZISP); Cherskiy (68.750ºN 161.332ºE), 4.VII.1971, Chelnokov (13 ♂♂, 3 ♀♀, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 6.2–9.4 mm. *Head*. Frontal vitta yellow or reddish yellow, with whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial yellow with golden reflection. Gena from yellow to brown. Postcranium black, grey dusted. 3 orbital and 4–5 frontal setae present. Antenna black. Scapus and pedicel yellowish or brownish; postpedicel usually yellowish basally and black in apical part, approximately 1.5–2



Figs 87–95. *Cordilura proboscidea* (Zetterstedt) (87–89), *C. pudica* (Meigen) (90–92) and *C. remmi* Elberg (93–95): 87, 90, 93 — male sternite 5; 88, 91, 94 — epandrium and surstyli, lateral view; 89, 92, 95 — same, dorsal view. 93–95 — after Ozerov & Krivosheina, 2017, figs 10–12.

Рис. 87–95. *Cordilura proboscidea* (Zetterstedt) (87–89), *C. pudica* (Meigen) (90–92) и *C. remmi* Elberg (93–95): 87, 90, 93 — стернит 5 самца; 88, 91, 94 — эпандрий и сурстили, сбоку; 89, 92, 95 — то же, сверху. 93–95 — по Ozerov & Krivosheina, 2017, figs 10–12.

times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus yellow. *Thorax* black, grey dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including small scapular seta), intra-alars 1+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* greyish dusted. Fore femur blackish basally and yellow apically or black completely; mid and hind femora from yellow completely to black completely. Tibiae of all legs yellow. Tarsi of all legs from yellow to blackish. *Wing* tinged with yellow; veins brownish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, grey dusted. Male sternite 4 trapezoid, slightly wider than long. Male sternite 5, epandrium and surstyli as in Figs 84–86.

DISTRIBUTION. Russia: Altai, Arkhangelsk Oblast, Chukotka, Kamchatka Krai, Karelia, Khabarovsk Krai, Komi, Krasnoyarsk Kray, Magadan Oblast, Sakhalin Oblast, Tyumen' Oblast, Yakutia. — Europe, North America.

Cordilura proboscidea (Zetterstedt, 1838)
Figs 16, 87–89.

proboscidea Zetterstedt, 1838: 728 (*Cordylura*). Type-locality: "Tromsoe ... Nordlandiae ... Wittangi Lapponiae Tornensis" (Norway, Sweden).

REMARK. Noted by Gorodkov [1970: 446, 1986: 15] for north of European part of Russia (Kola Peninsula, Polar Ural) and for north of Siberia, but without indicating specific locality.

MATERIAL EXAMINED. **Komi**: Sivaya Maska station (66.675°N 62.569°E), 5 km NW, 14.VII.1961, Gorodkov (2 ♂♂, 4 ♀♀, ZISP); **Krasnoyarsk Krai**: Igarka (67.457°N 86.598°E), River Yenisei, 1–3.VII.1967, Gorodkov (3 ♂♂, 6 ♀♀, ZISP); **Tyumen' Oblast**: Obdorsk [now =Salekhard] (66.53°N 66.6135°E), 25.VI.1914, Shukhov (1 ♂, ZISP); Tobol'sk (58.206°N 68.264°E), 22.V.1925, Fridolin (2 ♂♂, ZISP); **Yakutia**: Kyusyur (70.687°N 127.366°E), 14.VII.1957, Gorodkov (1 ♂, 1 ♀, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 6.8–7.8 mm. *Head*. Frontal vitta yellow; fronto-orbital plate black, greyish dusted. Face, parafacial and gena yellowish with whitish reflection. Postcranium black, greyish dusted. 3 orbital and 2–4 frontal setae present. Antenna blackish; postpedicel approximately 1.5–2 times as long as wide. Arista nearly bare, longest hairs not exceeding greatest diameter of arista. Palpus black. *Thorax* black, greyish dusted. Acrostichals setulose in two rows, dorsocentrals (4–5)+3 (including scapular seta), intra-alars 1+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* greyish dusted. Femora of all legs black; tibiae of all legs from yellow to blackish; tarsi of all legs yellow. *Wing* tinged with light brownish; veins brownish. Vein R_1 bare on apical third of dorsal surface. *Abdomen* black, greyish dusted. Male sternite 4 rectangular, wider than long (Fig. 16). Male sternite 5, epandrium and surstyli as in Figs 87–89.

DISTRIBUTION. Russia: Komi, Krasnoyarsk Krai, Tyumen' Oblast, Yakutia. — Europe, North America.

Cordilura pudica (Meigen, 1826)
Figs 13, 90–92.

pudica Meigen, 1826: 231 (*Cordylura*). Type-locality: not given.
geniculata Zetterstedt, 1846: 1997 (*Cordylura*). Type-localities: "Scania ... Smolandia ... Helsingia ... Lapponia Umensi ..." (Sweden).

REMARKS. This species was recorded in Russia from Yaroslavl' Oblast [Ovchinnikov, 2004: 422], from Amur Oblast, Primorsky Krai and Sakhalin Oblast [Ozerov, Krivosheina, 2014: 211], from Yakutia [Bagachanova *et al.*, 2016: 779]; noted by Gorodkov [1970: 446, 1986: 15] for European part of Russia without indicating specific locality.

MATERIAL EXAMINED. **Altai**: Artybash env., floodplain of the River Sema, 550 m, (51.87°N, 87.18°E), 22.VI.2009, V. Sorokina (1 ♀, ISEA); **Arkhangelsk Oblast**: Nar'yan-Mar (67.631°N 52.985°E, 67.627°N 53.000°E), 7–8.VII.2008, A.L. Ozerov (2 ♂♂, 3 ♀♀, ZMUM); Nenetsky Nature Reserve, cordon "Bol'shoy Gusinets" (68.175°N, 53.645°E), 9–10.VII.2008, A.L. Ozerov (2 ♂♂, 1 ♀, ZMUM); the lower reaches of the River Pechora (68.334°N, 53.304°E), 11.VII.2008, A.L. Ozerov (1 ♂, ZMUM); Solvychegodsk (61.342°N 46.913°E), 12–13.VIII.2010, D. Gavryushin (3 ♂♂, 3 ♀♀, ZMUM); Arkhangelsk (64.546°N 40.567°E), 5.VIII.2010, D. Gavryushin (1 ♀, ZMUM); 73 km NW of Nar'yan-Mar (ca. 67.981°N 51.608°E), 3.VIII.1978, Gorodkov (2 ♀♀, ZISP); Nizhnyaya Pesha (66.751°N 47.760°E), 22.VIII.1978, Gorodkov (3 ♂♂, 1 ♀, ZISP); Solovetskie Islands (65.080°N 35.686°E), 10.VI.1895, Birulya (1 ♀, ZISP); Karpogory (ca. 64°N 44.45°E), River Pinega, 6.VII.1996, Gorodkov (1 ♂, 1 ♀, ZISP); Solovetskiy I. (65.080°N 35.686°E), 27.VII.1959, Gorodkov (1 ♀, ZISP); **Bashkiria**: E of Kryktytau (53.525°N 58.498°E), 2–8.VIII.2008, K. Tomkovich (1 ♂, 1 ♀, ZMUM); **Buryatia**: Khargun, 6 km E of Kyren (51.683°N 102.132°E), Sayany, 11.VII.1965, Gorodkov (1 ♀, ZISP); **Chukotka**: bank of the River Anadyr (64.72°N 175.21°E), 25.VI.–19.VII.2014, A. Barkalov (1 ♂, ISEA); **Karelia**: Primorskiy (66.546°N 33.103°E), 5.VII.2010, A.L. Ozerov (6 ♂♂, 3 ♀♀, ZMUM); Poyakonda (66.589°N 33.821°E), 8.VII.2010, A.L. Ozerov (1 ♂, ZMUM); Kaskesnavolok (61.594°N 33.323°E), 20.VI.1979, Gorodkov (8 ♂♂, 2 ♀♀, ZISP); Kizhi (62.084°N 35.211°E), 19.VI.1979, Gorodkov (6 ♂♂, 2 ♀♀, ZISP); **Khabarovsk Krai**: Lake Sindinskoe (48.92°N 136.24°E), 7.VI.2014, N. Vikhrev (1 ♀, ZMUM); River Khicha (49.05°N 139.43°E), 10.VI.2014, N. Vikhrev (1 ♀, ZMUM); **Komi**: Ust-Tsilma (65.440°N 52.153°E), 11.VIII.1978, Gorodkov (1 ♀, ZISP); Inta (66.04°N 60.17°E), 5.VIII.1985, Gorodkov (4 ♀♀, ZISP); Ust'-Ukhta (63.620°N 53.878°E), 4.VIII.1985, Gorodkov (1 ♂, ZISP); Blagoevo (63.424°N, 47.952°E), 12.VII.1996, Gorodkov (3 ♀♀, ZISP); Sivaya Maska station (66.675°N 62.569°E), 5 km NW, 17.VII.1961, Gorodkov (2 ♂♂, 5 ♀♀, ZISP); **Krasnoyarsk Krai**: Igarka (67.457°N 86.598°E), River Yenisei, 1.VII.1967, Gorodkov (2 ♂♂, 9 ♀♀, ZISP); **Leningrad Oblast**: Gatshina (59.56°N 30.13°E), 10.VI.1940, A. Stackelberg (1 ♂, ZISP); Luga (ca. 58.73°N 29.84°E), 9.VIII.1954, A. Stackelberg (4 ♂♂, ZISP); **Moscow and Moscow Oblast**: Izmaylovo (55.802°N 37.844°E), 20.VI.2007, A.L. Ozerov (2 ♀♀, ZMUM); Kosino (55.721°N 37.847°E), 26.VI., 24–31.VII., 2.VIII., 8.IX.1921, B. Dodonov (2 ♂♂, 6 ♀♀, ZMUM); Skhodnya (55.842°N 37.412°E), 3.VII.1936, B. Rohdendorf (1 ♀, ZMUM); 20 km WSW of Volokolamsk (55.983°N 35.616°E), 11.VII.1999, A.L. Ozerov (2 ♀♀, ZMUM); Abramtsevo (56.23°N 37.956°E), 13 and 26.VIII.1955, 22.VII.1957, E.S. Smirnov (2 ♂♂, 1 ♀, ZMUM); Andreevskoe env. (55.974°N 35.604°E, 55.985°N 35.620°E, 55.985°N 35.622°E, 55.978°N 35.588°E), 15–16.VII.2006, 5.VI. and 9.VIII.2007, A.L. Ozerov (11 ♂♂, 4 ♀♀, ZMUM); Burtsevo env. (55.976°N 35.590°E, 55.978°N 35.590°E), 14.VIII.2008, 26.VII.2009, A.L. Ozerov (4 ♂♂, 2 ♀♀, ZMUM); Dmitrov env. (56.316°N 37.725°E), 10 and 15.V., 9.VII.2007, N. Vikhrev (3 ♂♂, 1 ♀, ZMUM); Mamontovka (55.999°N 37.816°E), 30.VII.1956, E. Smirnov (1 ♀, ZMUM); Molzhaninovka (55.936°N 37.385°E), 13.V.2010, A.L. Ozerov (1 ♀, ZMUM); Naro-Fominsk (55.357°N 36.736°E), 13.V.2006, D.

Gavryushin (1 ♂, ZMUM); Pavlovskoe env. (55.921ºN 35.588ºE), 14.VIII.2006, A.L. Ozerov (1 ♂, ZMUM); Snegiri (55.887ºN 37.028ºE), 26.V.1984, Gorodkov (2 ♂♂, 1 ♀, ZISP); Yur'evo env. (56.006ºN 35.546ºE, 55.005ºN 35.545ºE), 9.VIII.2007, 29.VII.2009, A.L. Ozerov (1 ♂, 2 ♀♀, ZMUM); **Murmansk Oblast**: Murmansk env. (68.976ºN 33.119ºE), 18–21.VII.2011, A. Ozerov (1 ♂, 2 ♀♀, ZMUM); **Novgorod Oblast**: Ramen'e (58.374ºN 33.430ºE), Okulovka env., 4.VI.1988, Gorodkov (1 ♀, ZISP); **Novosibirsk**: (54.825ºN 83.114ºE), 18.VI.2009, O. Kosterin (1 ♂, ZMUM); **Novosibirsk Oblast**: Zherebtsovo env. (55.125ºN 83.256ºE), 22.VI.2006, O. Kosterin (1 ♀, ZMUM); **Primorsky Krai**: Kamenushka (43.62ºN 132.23ºE), 22–24.VI.2014, N. Vikhrev (1 ♀, ZMUM); **Sakhalin Oblast**: Kunashir I., Mendeleev Volcano env. (43.961ºN 145.729ºE), 21.VI.1985, S. Churkin (1 ♀, ZMUM); Kunashir I., Kurilsky Nature Reserve, cordon Andreevskyi (45.54ºN 145.37ºE), 8.VII.2014, T.V. Galinskaya (2 ♀♀, ZMUM); **Saratov Oblast**: Nizhnyaya Bannovka (50.666ºN, 45.633ºE), 1–2.VII.2003, V. Krivokhatskiy, O. Ovchinnikova (1 ♀, ZISP); **Sverdlov Oblast**: Ekaterinburg, Uktus station (56.780ºN 60.628ºE), 19.VI.1910, Yakobson (1 ♀, ZISP); **Tver' Oblast**: Ostashkov (57.140ºN 33.163ºE), 13.VI., 14.VII.1936, B. Rohdendorf (2 ♂♂, 1 ♀, ZMUM); **Tyumen' Oblast**: Shapsha env. (61.085ºN 69.458ºE), 14–16.VII.2010, K. Tomkovich (1 ♂, ZMUM); Saranpaul' (64.257ºN 60.917ºE), 23.VI.1989, Malozemov (1 ♂, ZISP); **Yakutia**: Verkhoyansk (67.548ºN 133.396ºE), 23.VII.1974, Gorodkov (1 ♀, ZISP) **Yaroslavl' Oblast**: Berditsyno (57.455ºN 40.107ºE), 17.VI. and 8.VII.1906, 3.VII.1907, A. Yakovlev (7 ♂♂, 6 ♀♀, ZISP).

ADDITIONAL MATERIAL EXAMINED. **Belarus**: Belovezhskaya Pushcha (52.707ºN 23.862ºE), 17.VII.1961, Nartshuk (1 ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 6.2–8.6 mm. *Head*. Frontal vitta from reddish yellow to blackish, with whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial yellow with whitish reflection. Gena from yellow to blackish. Postcranium black, greyish dusted. 3 orbital and 2–3 frontal setae present. Antenna black. Postpedicel approximately 2–2.5 times as long as wide. Arista pubescent, the longest hairs approximately equal to 1/2 width of postpedicel. Palpus black. *Thorax* black, densely grey dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars 1+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae (Fig. 13). *Legs* greyish dusted. Femora of all legs black, only apex yellow; tibiae and tarsi of all legs yellow. *Wing* tinged with brownish; veins brownish. Vein R_1 bare on apical third of dorsal surface. *Abdomen* black, densely grey dusted. Male sternite 4 rectangular, almost as long as wide. Male sternite 5, epandrium and surstyli as in Figs 90–92.

DISTRIBUTION. Russia: Altai, Arkhangelsk Oblast, Bashkiria, Buryatia, Chukotka, Karelia, Khabarovsk Krai, Komi, Krasnoyarsk Krai, Leningrad Oblast, Moscow Oblast, Murmansk Oblast, Novgorod Oblast, Novosibirsk Oblast, Primorsky Krai, Sakhalin Oblast, Saratov Oblast, Sverdlov Oblast, Tver' Oblast, Tyumen' Oblast, Yakutia, Yaroslavl' Oblast. — Europe, Belarus (**first record**), China [Sun, 1993: 440], North America.

Cordilura remmi Elberg, 1972
Figs 8, 93–95.

remmi Elberg, 1972: 91 (*Cordilura*). Type-locality: "Sakhalin I., environment of South Sakhalinsk" (Russia, Sakhalin Oblast).

REMARK. This species was described on material from Amur Oblast and Sakhalin Oblast, Khabarovsk and Primorsky Krai [Elberg, 1972: 91], after recorded in Russia also from Jewish Autonomus Oblast by Ozerov & Krivosheina [2014: 211].

MATERIAL EXAMINED. **Amur Oblast**: Blagoveshchensk (50.280ºN 127.535ºE), 17.VIII.1982, A. Leley (1 ♀, ZISP); River Nyukzha (56.574ºN 121.652ºE), 18.VI.1976, Soboleva (2 ♀♀, IBSS); Komsomol'sk-na-Amure, Silinskiy Park (50.573ºN 137.039ºE), 29.V.1985, Mutin (1 ♀, IBSS); Zeya Town (53.748ºN 127.261ºE), 26.VI., 3–12.VII.1978, 16–20.VII., 3–13.VIII., 1.IX.1981, 14.VIII.1982, A. Ozerov, A. Shatalkin (14 ♂♂, 16 ♀♀, ZMUM); Zeysky Nature Reserve, cordon "34 km" (53.989ºN 127.073ºE), 24.–30.VII.1981, 10 and 21.VII.1982, A.L. Ozerov, A. Shatalkin, M. Krivosheina, O. Gorbunov (3 ♂♂, 7 ♀♀, ZMUM); Zeysky Nature Reserve, cordon "52 km" (54.087ºN 126.871ºE), 24.VIII.1981, 12.VIII.1982, A.L. Ozerov, A. Shatalkin (1 ♂, 2 ♀♀, ZMUM); 5–6 km above of Ekimchan (53.085ºN 132.974ºE), 23.VIII.2006, A.B. Ryvkin (1 ♀, ZMUM); 52 km N of Zeya Town (54.087ºN, 126.871ºE), 20.VII.1982, V. Zlobin (2 ♀♀, ZISP); Bol'shoy Never (53.978ºN 124.150ºE), 8.IX.1974, Gorodkov (2 ♀♀, ZISP); **Buryatia**: Barguzinsky Nature Reserve (ca. 54.35ºN 109.51ºE), 15 and 22.VII.1965, Negrobov (2 ♂♂, 3 ♀♀, ZISP); **Jewish Autonomus Oblast**: Malyy Khingan ridge, River Dichun (48.545ºN 130.760ºE), 15.VII.1979, A. Shatalkin (1 ♂, ZMUM); **Khabarovsk Krai**: Ochotsk env. (59.366ºN 143.229ºE), 27.VIII.1987, Gorodkov (3 ♀♀, ZISP); Khabarovsk (48.426ºN 135.118ºE), 23.VI.1912, Speshilova-Petelina (1 ♀, ZISP); same place, 17.VI.1931, V. Pereleshina (1 ♂, 1 ♀, ZMUM); Khabarovsk env. (ca. 48.426ºN 135.118ºE), 21–22.VIII.1979, Nartshuk (1 ♀, ZISP); **Primorsky Krai**: 30 km S of Lazo, Benevskoe (43.166ºN 133.757ºE), 16.VIII.1986, A. Leley (1 ♂, ZISP); 5 km S of Yakovlevka (44.427ºN 133.479ºE), 29.VI.–1.VII.1986, A. Leley (1 ♂, 2 ♀♀, IBSS); Vladivostok, Morskoe kladbishche (43.083ºN 131.934ºE), 13.VIII.1993, Belokobyl'skiy (1 ♂, ZISP); Gorno-Taezhnaya station, Krivoy klyuch (43.693ºN 132.1525ºE), 30.VII. and 26.VIII.1980, M. Mikhaylovskaya (2 ♂♂, IBSS); Dal'nerechensk 2 (45.926ºN 133.740ºE), 25.VII.1980, M. Mikhaylovskaya (1 ♂, IBSS); Kamenushka (43.634ºN 132.222ºE), 21–30.VII., 19–20.VIII.1983, 25.VII., 4–26.VIII.1984, 4 and 17.VI.1985, 14–16.VII.1986, 9–26.VIII., 1–15.IX.1987, 31.VIII.–3.IX.1988, 19.VIII.1989, A. Antropov, A.L. Ozerov, A. Shatalkin, S. Churkin (21 ♂♂, 15 ♀♀, ZMUM); same place, 7.VII. and 13.VIII. 1981, Mutin, Belova (1 ♂, 1 ♀, IBSS); Kedrovaya Pad' Nature Reserve (43.104ºN 131.512ºE), 22.VIII.1982, Romanova (1 ♀, ZISP); same place, 29.VIII.1978, D. Shcherbakov (1 ♂, ZMUM); Kievka (42.904ºN 133.701ºE), 2.IX.1980, A. Shatalkin (1 ♀, ZMUM); Lazovsky Nature Reserve, 10 km W of Preobrazhenie (42.912ºN 133.774ºE), 16.VIII.1986, A. Leley (1 ♂, ZISP); Bikin River, 22 km above of the mouth of the River Svetlovodnaya (46.616ºN 137.054ºE), 14.VIII.1980, V. Zlobin (2 ♀♀, ZISP); River Bol'shaya Ussurka, 20 km NW of Mel'nichnoe (45.548ºN 135.347ºE), 2.VIII.1986, A. Leley (3 ♀♀, IBSS); Spassk (44.600ºN 132.816ºE), 6–17.VI., 3–10.VII.1961, Zhelokhovtsev (1 ♂, 4 ♀♀, ZMUM); Suvorovo (44.248ºN 135.347ºE), 17.VII.1972, A. Ponomarenko (1 ♂, ZMUM); Sudzukhinsky [=Lazovsky] Nature Reserve, Tachingou (43.023ºN 134.136ºE), 23.VIII., 6.IX.1948, Gussakovskiy (2 ♀♀, ZMUM); Yakovlevka (44.422ºN 133.474ºE), 24 and 27.VII.1962, Nartshuk (2 ♂♂, 3 ♀♀, ZISP); Shkotovskoe plateau (ca. 43.458ºN 132.632ºE), 25.VIII.1962, Nartshuk (1 ♂, 1 ♀, ZISP); Gornotaezhnoe (43.697ºN 132.156ºE), 29.VII. and 5.VIII.1980, Afanas'eva (2 ♀♀, ZISP); same place, 1 and 15.VII.1980, V. Zlobin (2 ♀♀, ZISP); Ussuriyskiy Nature Reserve (ca. 43.635ºN 132.311ºE), 14–17.VII. 1981, Ovchinnikova (1 ♂, ZISP); Monakino (43.392ºN 133.433ºE), 30.VIII.1962, Nartshuk (1 ♀, ZISP); Kamenushka (43.634ºN, 132.222ºE), 23.VI.1980, Zlobin (1 ♀, ZISP); Sikhote-Alin Reserve, Blagodatnoe (44.975ºN 136.526ºE), 13.VII.2018, M. Sergeev (1 ♂, ZMUM); **Sakhalin Oblast**: Kunashir I., 7 km N of Mendeleevo (44.023ºN 145.680ºE), 22.VIII.1975, Berezantsev (1 ♀, IBSS); Kunashir I., 7 km S of Lake Lagunnoe (44.001ºN 145.760ºE), 12 and 15.VIII.1989, Leley, Sidorenko (1 ♂, 1 ♀, IBSS); Kunashir I., caldera of Golovnin Volcano (43.843ºN 145.505ºE), 3.VIII.1989, Sidorenko (1 ♂, 1 ♀, IBSS); Kunashir I., Stolbchatyy Cape



Figs 96–103. *Cordilura remota* Ozerov (96, 97), *C. richterae* Ozerov et Krivosheina (98–100) and *C. rufimana* (Meigen) (101–103): 98, 101 — male sternite 5; 96, 99, 102 — epandrium and surstyli, lateral view; 97, 100, 103 — same, dorsal view. 98–100 — after Ozerov & Krivosheina, 2015, figs 2–4.

Рис. 96–103. *Cordilura remota* Ozerov (96, 97), *C. richterae* Ozerov et Krivosheina (98–100) и *C. rufimana* (Meigen) (101–103): 98, 101 — стернит 5 самца; 96, 99, 102 — эпандрий и сурстили, сбоку; 97, 100, 103 — то же, сверху. 98–100 — по Ozerov & Krivosheina, 2015, figs 2–4.

(44.023ºN 145.678ºE), 4.IX.1971, Nartshuk (2 ♀♀, ZISP); same place, 28.VII.1989, Sidorenko (1 ♂, IBSS); Kunashir I., Yuzhno-Kuril'sk env. (44.029ºN 145.860ºE), 18–19.VIII.1989, Leley, Sidorenko (1 ♂, 1 ♀, IBSS); Kuril Islands, Shikotan I., Tserkovnaya Bay (43.75ºN 146.70ºE), 10–30.IX.2012, Yu. Sundukov (2 ♀♀, ZMUM); Sakhalin I., Pereput'e (46.307ºN 141.892ºE), 22.VII.1953, N. Filippov (1 ♂, ZMUM); Kunashir I., Mendeleev Volcano env. (43.961ºN 145.729ºE), 26.VII.1985, S. Churkin (1 ♀, ZMUM); Kunashir I., Kurilsky Nature Reserve, cordon Andreevsky (43.54ºN 145.37ºE), 6–8.VII.2014, I.A. Gomyranov (2 ♂♂, 1 ♀, ZMUM); same place, 8.VII.2014, T.V. Galinskaya (3 ♂♂, 3 ♀♀, ZMUM); Kunashir I., Tret'yakovo (43.989ºN 145.644ºE), 8.VIII.1971, Nartshuk (1 ♂, ZISP); same place, 10.VII.2085, S. Churkin (1 ♀, ZMUM); same place, 12.VII.2014, T.V. Galinskaya (2 ♂♂, ZMUM); Kunashir I., Alekhino (43.955ºN 145.592ºE), 31.VIII.1971, Nartshuk (1 ♀, ZISP); same place, 28.VII.1973, Kasparyan (1 ♂, ZISP); Kunashir I., Yuzhno-Kuril'sk (44.029ºN 145.859ºE), 12.VIII.1971, Nartshuk (1 ♂, ZISP); Sakhalin I., Novo-Aleksandrovsk (47.056ºN 142.730ºE), 18.VII.1961, Krivolutskaya (1 ♂, IBSS); same place, 11.VII.1968, Nartshuk (1 ♀, ZISP); **Zabaykalsky Krai**: the upper reaches of the River Ingoda, River Dzhila (50.994ºN 111.887ºE), 4.VII.1947, Zhelokhovtsev (1 ♂, ZMUM); Lesnoy (51.730ºN 113.071ºE), 4.VII.1971, V. Richter (1 ♀, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 6.2–9.8 mm. *Head*. Frontal vitta black with weak whitish reflection; fronto-orbital plate black, shining. Face and parafacial yellowish, with whitish reflection in male, and black, delicately grey dusted in female. Gena black in both sexes. Postcranium black completely, greyish dusted. 2 orbital and 3–4 frontal setae present. Antenna brownish in male; postpedicel approximately 4 times as long as wide. Antenna blackish in female; postpedicel approximately 3 times as long as wide. Arista pubescent or plumose, the longest hairs approximately equal to 1/2–3/4 width of postpedicel. Palpus from dark yellow to black. *Thorax* black, delicately greyish dusted; scutum subshining. Acrostichals absent, dorsocentrals 2+3 (including scapular seta), intra-alars absent, supra-alars 0+2, 1 postpronotal. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae. *Legs* shining. Fore coxa white. Femora of all legs black; fore and mid tibiae, also tarsi of all legs yellow; hind tibia usually brownish. *Wing* tinged with strong brownish; veins blackish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, subshining. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 93–95.

DISTRIBUTION. Russia: Amur Oblast, Buryatia, Jewish Autonomus Oblast, Khabarovsk Krai, Primorsky Krai, Sakhalin Oblast, Zabaykalsky Krai. — Japan [Iwasa, 2020: 477].

Cordilura remota Ozerov, 1997
Figs 96, 97.

remota Ozerov, 1997: 1425 (*Cordilura*). Type-locality: Zeya Town (Russia, Amur Oblast).

REMARK. The species was described from Amur Oblast and Primorsky Krai [Ozerov, 1997: 1425].

MATERIAL EXAMINED. **Amur Oblast**: Zeya Town (53.748ºN 127.261ºE), 15.VI.1981, A. Ozerov (1 paratype ♂, ZMUM); **Primorsky Krai**: Ryazanovka (42.797ºN 131.244ºE), 11.VI.1989, A. Shatalkin (1 paratype ♂, ZMUM); Andreevka env. (42.7ºN 131.1ºE), 26–31.VII.2018, N. Vikhrev (1 ♂, ZMUM).

DIAGNOSTIC DESCRIPTION. Male. Body-length 5.0–6.5 mm. *Head*. Frontal vitta and fronto-orbital plate yellow. Face, parafacial and gena yellowish, with weak whitish reflection. Postcranium yellow in lower part and black in upper half. 2 orbital and 2 frontal setae present. Antenna pale yellow. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus yellow. *Thorax* yellow in ground colour, but scutum black between postronotal lobes and intra-alar lines; mediotergite black. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars not developed, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae. *Legs* shining, yellow. *Wing* tinged with brownish, with a distinct brown shadow apically; veins blackish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, subshining. Male sternite 4 rectangular, longer than wide. Epandrium and surstyli as in Figs 96, 97.

Female unknown.

DISTRIBUTION. Russia: Amur Oblast, Primorsky Krai.

Cordilura richterae Ozerov et Krivosheina, 2015
Figs 98–100.

richterae Ozerov, Krivosheina, 2015: 491 (*Cordilura*). Type-locality: Iturup I., Rybaki (45.207ºN 147.848ºE) (Russia, Sakhalin Oblast).

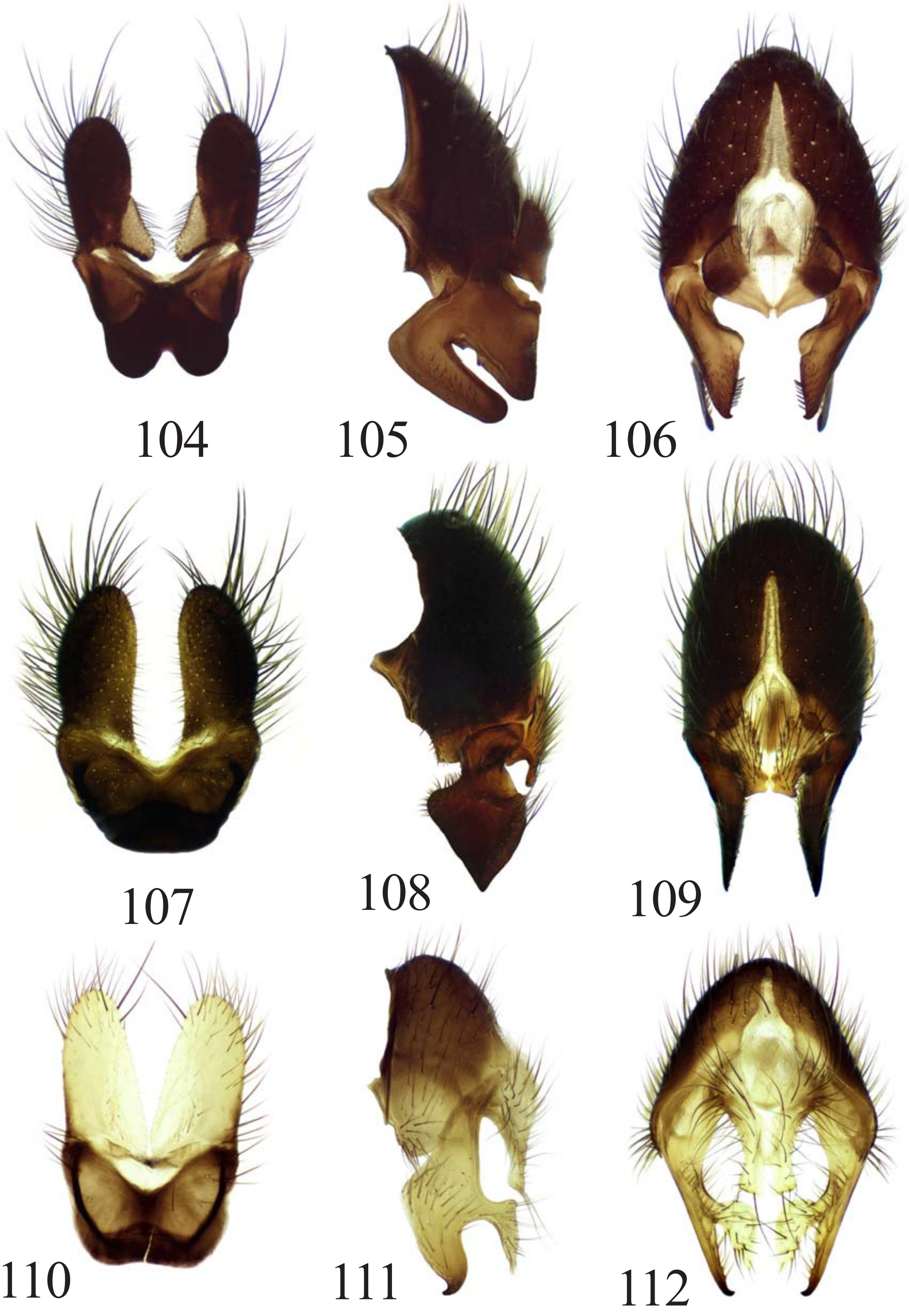
REMARK. This species was known from the type-locality only.

MATERIAL EXAMINED. **Sakhalin Oblast**: Kunashir I., Dubovoe (43.766ºN 145.499ºE), 10.VI.1973, Ermolenko (2 ♂♂, ZISP); Kunashir I., Lake Lagunnoe (44.060ºN 145.759ºE), 18.VI.1968, Nartshuk (2 ♂♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Body-length 4.8–7.2 mm. *Head*. Frontal vitta yellow, whitish dusted; fronto-orbital plate whitish dusted, yellow completely or blackish in upper half and yellow in lower half. Face, parafacial and gena yellow, whitish dusted. Postcranium black, delicatly greyish dusted. 2 orbital and 2–3 frontal setae present. Antenna yellow. Postpedicel approximately 2 times as long as wide. Arista yellow basally and black apically, plumose in basal half, the longest hairs approximately equal to the width of postpedicel. Palpus yellow. *Thorax* black, scutum subshining, thoracic sclerites greyish dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including short scapular seta), intra-alars (0–1)+1, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae and a pair of apical setulae. *Legs*. Ground-colour yellow. Coxae of mid and hind legs black, mid and hind tibiae darkened. *Wing* tinged with brownish; veins pale brown. Vein R_1 with 4–5 setulae of dorsal surface. *Abdomen* black, delicately greyish dusted. Sternite 4 trapezoid, slightly longer than wide. Sternite 5, epandrium and surstyli as in Figs 98–100.

Female unknown.

DISTRIBUTION. Russia: Sakhalin Oblast.



Figs 104–112. *Cordilura rufipes* (Meigen) (104–106), *C. sagittifera* Gorodkov (107–109) and *C. shatalkini* Ozerov (110–112): 104, 107, 110 — male sternite 5; 105, 108, 111 — epandrium and surstyli, lateral view; 106, 109, 112 — same, dorsal view. 105 — after Ozerov & Krivosheina, 2014, fig. 15.

Рис. 104–112. *Cordilura rufipes* (Meigen) (104–106), *C. sagittifera* Gorodkov (107–109) и *C. shatalkini* Ozerov (110–112): 104, 107, 110 — стернит 5 самца; 105, 108, 111 — эпандрий и сурстили, сбоку; 106, 109, 112 — то же, сверху. 105 — по Ozerov & Krivosheina, 2014, fig. 15.

Cordilura rufimana (Meigen, 1826)
Figs 17, 101–103.

rufimana Meigen, 1826: 232 (*Cordylura*). Type-locality: not given.

incerta Zetterstedt, 1838: 690 (*Anthomyza*). Type-locality: "alpium Tornensium jugo.. .(Lapponia)" (Sweden).

tibialis Zetterstedt, 1838: 725 (*Cordylura*). Type-localities: "Lapponia Umensi... Lycksele et Åsele" (Sweden).

REMARK. Noted by Gorodkov [1970: 446, 1986: 15] for north of European part of Russia and north of Siberia without indicating specific locality; recorded from Yakutia [Bagachanova *et al.*, 2016: 779].

MATERIAL EXAMINED. **Altai**: Kosh-Agach env., (50.01ºN 88.66ºE), 1750 m, 2–4.VII.2016, N. Vikhrev (1 ♂, ZMUM); River Chirya [=Chiri] (51.361ºN 87.837ºE), Lake Teletskoe, 30.VI.1909, Emel'yanov (1 ♀, ZISP); **Amur Oblast**: Zeya Town (53.748ºN 127.261ºE), 12–17.VI.1978, 24.VII.1982, A. Shatalkin, A.L. Ozerov (1 ♂, 2 ♀♀, ZMUM); Khingansky Nature Reserve, 7 km E of Ukrainka (49.477ºN 129.666ºE), 11.VI.1987, A. Leley (1 ♀, IBSS); Bol'shoy Never (53.978ºN 124.150ºE), 15.VI.1927, Zakharzhevskiy (1 ♀, ZISP); **Arkhangelsk Oblast**: Ust'-Kozhva (65.144ºN 57.002ºE), 23.VII.1908, Zhuravskiy (1 ♀, ZISP); Nenetsky Nature Reserve, cordon "Bol'shoy Gusinets" (68.175ºN 53.645ºE), 10.VII.2008, A.L. Ozerov (1 ♀, ZMUM); **Buryatia**: Selenduma (50.916ºN 106.239ºE), 25.VI.1971, V. Richter (2 ♀♀, ZISP); Mondy env. (51.675ºN 100.992ºE), 15.VII.1965, Gorodkov (1 ♂, ZISP); **Chukotka**: bank of the River Anadyr (64.72ºN 175.21ºE), 25.VI.–19.VII.2014, A. Barkalov (5 ♂♂, 1 ♀, ZMUM and ISEA); Meynypil'gyno env. (62.538ºN 177.051ºE), 15.VII.2014, P.S. Tomkovich (1 ♂, ZMUM); Bilibino (68.058ºN 166.446ºE), 5.VII.1971, Gorodkov (6 ♂♂, 13 ♀♀, ZISP); **Kamchatka Krai**: Apuka env. (60.443ºN 169.602ºE), 2 and 3.VII.1959, Gorodkov (2 ♂♂, ZISP); **Karelia**: Primorsky (66.546ºN 33.103ºE), 30.VI., 4 and 6.VII.2010, A.L. Ozerov (2 ♂♂, 1 ♀♀, ZMUM); **Komi**: Sovetsky env. (67.495ºN 64.419ºE), 20.VI.2012, S.V. Pestov (1 ♂, ZMUM); Vil'gort (60.560ºN 56.465ºE), 11.VII.1957, Gabova (1 ♀, ZISP); Inta (66.04ºN 60.17ºE), 5.VIII.1985, Gorodkov (1 ♀, ZISP); Ust'-Ukhta (63.620ºN 53.878ºE), 4.VIII.1985, Gorodkov (1 ♀, ZISP); **Krasnoyarsk Krai**: Igarka (67.457ºN 86.598ºE), River Yenisei, 1.VII.1967, Gorodkov (1 ♀, ZISP); Ergaki National Park (52.84ºN 93.25ºE), 1450 m, 27–29.VI.2017, N. Vikhrev (3 ♂♂, 1 ♀, ZMUM); **Leningrad Oblast**: Fan-der-Flit station (58.641ºN 29.693ºE), 13.VI.1925, A. Stackelberg (1 ♀, ZISP); Rozhdestveno (59.322ºN 29.946ºE), 4.VI.1956, A. Stackelberg (4 ♂♂, 1 ♀, ZISP); Yashchera (58.894ºN 29.820ºE), 23.VII.1957, A. Stackelberg (2 ♂♂, ZISP); **Magadan Oblast**: Sokol env. (59.92ºN 150.71ºE), 11–19.VII.2014, N. Vikhrev (1 ♀, ZMUM); **Moscow Oblast**: Dmitrov env. (56.316ºN 37.725ºE), 7.VI.2007, N. Vikhrev (1 ♀, ZMUM); **Murmansk Oblast**: Lake Vud'yavr Basin (ca. 67.646ºN 33.644ºE), 14.VII.1931, 27.VIII.1935, Fridolin (2 ♂♂, ZISP); **Novgorod Oblast**: Ramen'e (58.374ºN 33.430ºE), Okulovka env., 11.VI.1988, Gorodkov (1 ♂, ZISP); **Omsk Oblast**: Irtysh env. (54.99ºN 73.32ºE), 18–22.VIII.2007, O. Kosterin (1 ♀, ZMUM); **Sakhalin Oblast**: Kunashir I., Mendeleev Volcano env. (43.961ºN 145.729ºE), 2.VI.1985, S. Churkin (1 ♀, ZMUM); Kunashir I., Tret'yakovo (43.989ºN 145.644ºE), 15.VI.1968, V. Richter (1 ♀, ZISP); Kunashir I., Sernovodsk (43.912ºN 145.641ºE), 30.VI.1968, Nartshuk (1 ♀, ZISP); **Smolensk Oblast**: Smolenskoe poozer'e National Park (55.511ºN 31.839ºE), 3.VIII.1991, Zlobin (1 ♀, ZISP); **Tyumen' Oblast**: Seliyarovo (61.467ºN 70.731ºE), 17–20.VII.2010, K. Tomkovich (1 ♂, 1 ♀, ZMUM); Obdorsk [=Salekhard] (66.53ºN 66.613ºE), 15 and 19.VII.1925, Fridolin (6 ♂♂, 5 ♀♀, ZISP); Saranpaul' (64.257ºN 60.917ºE), 23.VI.1989, Malozemov (1 ♀, ZISP); **Ul'yanovsk Oblast**: Baryshskaya sloboda (54.583ºN 46.791ºE), 12.VI.1996, V.B. Isaeva (1 ♂, ZMUM); **Yakutia**: River Yana, Stolby env. (67.531ºN 134.087ºE), 26–28.VII. 2008, A. Ovchinnikov (4 ♂♂, 1 ♀, ZISP); Verkhoyansk (67.548ºN 133.396ºE), 22–25.VII.1974, Gorodkov (10 ♂♂, 15 ♀♀, ZISP); Balagannakh (64.495ºN 143.817ºE), 4–6.VII.1974, Nartshuk (7 ♂♂, 1 ♀, ZISP); River Yana opposite of Verkhoyansk (67.550ºN 133.359ºE), 21–23.VII.1974, Nartshuk (2 ♂♂, 2 ♀♀, ZISP); the mouth of the River Olekma (60.366ºN 120.667ºE), 3.VIII.1974, Nartshuk (1 ♂, ZISP); Batagay (67.653ºN 134.635ºE), 21.VII.1974, Gorodkov (1 ♀, ZISP); Zhatay env. (62.162ºN 129.834ºE), 24.VII.2002, Evdokarova (1 ♀, ZISP); **Zabaykalsky Krai**: Darasun env. (51.200ºN 113.702ºE), 26.VI.–7.VII.1949, N. Filippov (1 ♂, 1 ♀, ZMUM).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 4.8–7.9 mm. *Head*. Frontal vitta reddish yellow, matt; fronto-orbital plate black, greyish dusted. Face, parafacial and gena yellow with whitish reflection. Postcranium black, greyish dusted. 3 orbital and 3–4 frontal setae present. Antenna black. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus black. *Thorax* black, greyish dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars 1+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* delicately greyish dusted. Femora of all legs black; fore tibia and tarsi of all legs yellow; mid tibia from yellow to blackish; hind tibia black or dark brown. *Wing* tinged with brownish; veins brownish. Vein R_1 bare on apical third of dorsal surface. *Abdomen* black, greyish dusted. Male sternite 4 rectangular, as long as wide (Fig. 17). Male sternite 5, epandrium and surstyli as in Figs 101–103.

DISTRIBUTION. Russia: Altai, Amur Oblast, Arkhangelsk Oblast, Buryatia, Chukotka, Kamchatka Krai, Karelia, Komi, Krasnoyarsk Krai, Leningrad Oblast, Magadan Oblast, Moscow Oblast, Novgorod Oblast, Omsk Oblast, Sakhalin Oblast, Smolensk Oblast, Tyumen' Oblast, Ul'yanovsk Oblast, Yakutia, Zabaykalsky Krai. — Europe, North America.

Cordilura rufipes (Meigen, 1826)
Figs 1, 3, 11, 14, 104–106.

rufipes Meigen, 1826: 232 (*Cordylura*). Type-locality: not given.

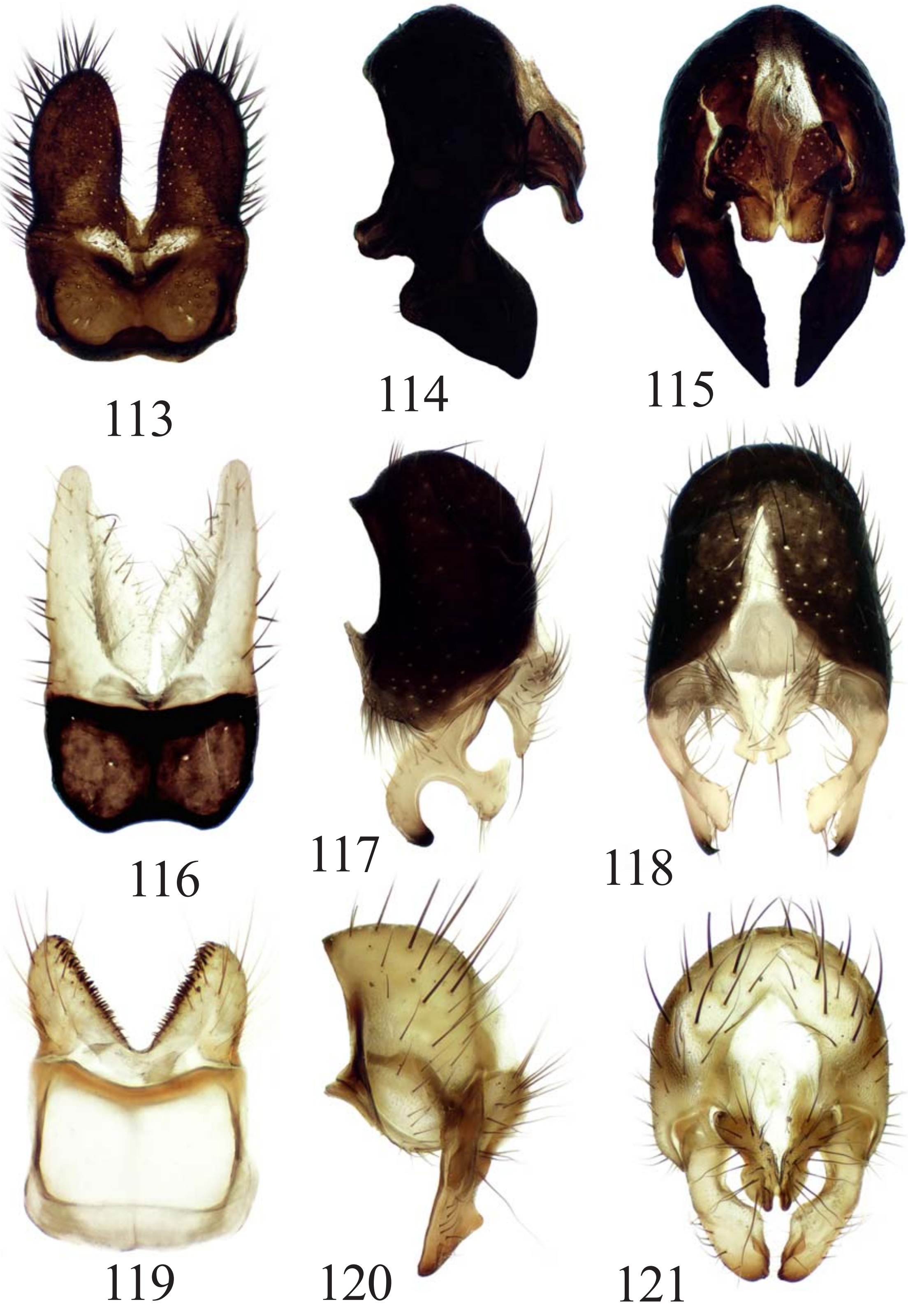
pubera Linnaeus, 1758 sensu Fallén, 1810: 15 (*Cordilura*), misidentification.

REMARK. This species was recorded in Russia as widespread species by Gorodkov [1986: 15, as *C. pubera* Linnaeus, 1758] without specifying the place of collecting; recorded from Karelia [Humala, Polevoi, 2009: 71], from Saratov Oblast and Yaroslavl' Oblast [Ovchinnikov, 2004: 421], and from Yakutia [Bagachanova *et al.*, 2016: 779].

MATERIAL EXAMINED. **Altai**: Lake Petukhovo (52.25ºN 79.16ºE), 20.VI.2009, O. Kosterin (1 ♂, ZMUM); Kosh-Agach env., (50.01ºN 88.66ºE), 1750 m, 2–4.VII.2016, N. Vikhrev (1 ♂, ZMUM); 10 km E of Cheke-Taman Pass, River Bol'shoy Il'gumen' (50.613ºN 86.469ºE), 28.VII.2006, A. Ovchinnikov (1 ♂, 1 ♀, ZISP); Artybash env. (51.796ºN 87.265ºE), 16.VII.2006, A. Ovchinnikov (1 ♀, ZISP); Turochak env. (52.261ºN 87.123ºE), 17.VII.2006, A. Ovchinnikov (1 ♀, ZISP); same place, 18–19.VII.2006, Nartshuk (1 ♂, ZISP); River Chirya [=Chiri] (51.361ºN 87.837ºE), Lake Teletskoe, 30.VI., 1 and 4.VII.1909, Emel'yanov (4 ♂♂, 1 ♀, ZISP); **Arkhangelsk Oblast**: Nar'yan-Mar env. (67.627ºN 53.000ºE, 67.631ºN 52.985ºE), 7–8.VII.2008, N.E. Vikhrev, A.L. Ozerov (3 ♂♂, 2 ♀♀, ZMUM); Nenetsky Nature Reserve, cordon "Bol'shoy Gusinets" (68.175ºN 53.645ºE), 10.VII.2008, A.L. Ozerov (1 ♂, 1 ♀, ZMUM); Solvychegodsk (61.334ºN 46.926ºE, 61.327ºN

46.926ºE), 11 and 17.VIII.2010, D. Gavryushin (2 ♀♀, ZMUM); Bol'shoy Solovetskiy I. (65.078ºN, 35.671ºE), 12–29.VII.1997, K. Tomkovich (1 ♂, ZMUM); airport Talagi (64.597ºN 40.709ºE), 1.VIII.1978, Gorodkov (1 ♂, 1 ♀, ZISP); Karpogory (ca. 64ºN 44.45ºE), River Pinega, 10.VII.1996, Gorodkov (7 ♀♀, ZISP); Velikovisochnoe (67.255ºN 52.032ºE), 18.VIII.1978, Gorodkov (1 ♀, ZISP); Nar'yan-Mar (67.636ºN 53.031ºE), 4, 7 and 20.VIII.1978, Gorodkov (6 ♂♂, 1 ♀, ZISP); Nizhnyaya Pesha (66.751ºN 47.760ºE), 22.VIII.1978, Gorodkov (1 ♀, ZISP); Solovetskie Islands (65.080ºN 35.686ºE), 15.VI.1896, Birulya (2 ♂♂, ZISP); Kargopol' (61.503ºN 38.971ºE), 13 and 16.VII.1982, Gorodkov (2 ♂♂, 4 ♀♀, ZISP); **Bashkiria**: Irgizly (52.960ºN 57.023ºE), 12.VI.1899, Yakobson & Shmidt (1 ♂, ZISP); Abzakovo (53.82ºN, 58.62ºE), 500 m, 15–19.VI.2020, N. Vikhrev (2 ♂♂, ZMUM); **Buryatia**: Barguzinsky Nature Reserve (ca. 54.35ºN 109.51ºE), 30.VII.1965, Negrobov (1 ♀, ZISP); **Chelyabinsk Oblast**: Taganay (55.277ºN 59.795ºE), 18–24.VII.2008, K. Tomkovich (1 ♀, ZMUM); **Crimea**: (ca. 44.483ºN 33.866ºE), "from Karakau to Yayly", Vidgal'm (4 ♂♂, ZISP); **Irkutsk Oblast**: Listvyanka (51.863ºN 104.866ºE), 24.VI.1965, Negrobov (2 ♀♀, ZISP); Novochunka (56.114ºN 99.273ºE), 5.VI.1957, Gorodkov (2 ♂♂, ZISP); **Kabardino-Balkaria**: Terskol (43.252ºN 42.521ºE), 2400 m, 17.VI.1972, V. Richter (1 ♂, ZISP); **Karelia**: Primorskiy (66.546ºN 33.103ºE), 3–6.VII.2010, A.L. Ozerov (4 ♂♂, 10 ♀♀, ZMUM); Sumskoy posad (64.238ºN 35.408ºE), 27.VII.1996, Gorodkov (1 ♀, ZISP); Kizhi (62.084ºN 35.211ºE), 19.VI.1979, Gorodkov (1 ♂, 1 ♀, ZISP); **Komi**: Vorkuta (67.5ºN 64.0ºE), 19–25.VII.2010, N. Vikhrev (4 ♀♀, ZMUM); 3 km N of Ust-Tsilma (ca. 65.45ºN 52.11ºE), 10.VIII.1978, Gorodkov (1 ♂, ZISP); Inta (66.04ºN 60.17ºE), 1–7.VII.1961, Gabova (1 ♂, 5 ♀♀, ZISP); Shchel'yabozh (66.29ºN 56.45ºE), 15.VIII.1978, Gorodkov (6 ♂♂, 6 ♀♀, ZISP); Shchel'yayur (65.33ºN 53.43ºE), 12.VIII.1978, Gorodkov (3 ♂♂, 3 ♀♀, ZISP); **Krasnodar Krai**: Teberdinsky Nature Reserve (ca. 43.405ºN 41.721ºE), 6.VII.1960, Gorodkov (10 ♂♂, 5 ♀♀, ZISP); **Krasnoyarsk Krai**: "Stolby" (55.962ºN 92.750ºE, 55.970ºN 92.742ºE), 31.VII.2009, 19.VI.2011, K. Tomkovich (1 ♂, 2 ♀♀, ZMUM); Dudinka (69.404ºN 86.182ºE), 3.VII.1967, Gorodkov (1 ♂, ZISP); Igarka (67.457ºN 86.598ºE), River Yenisei, 30.VI.1967, Gorodkov (2 ♀♀, ZISP); Ergaki National Park (52.84ºN 93.25ºE), 1450 m, 27–29.VI.2017, N. Vikhrev (8 ♂♂, 2 ♀♀, ZMUM); **Kursk Oblast**: Zorino (51.172ºN 36.353ºE), 14.V.2008, K. Tomkovich (2 ♂♂, 1 ♀, ZMUM); **Leningrad Oblast**: Bol'shoy Berezovyy I. (60.3ºN 28.62ºE), 31.V. and 1.VI.1981, Kandybina (2 ♀♀, ZISP); Gatshina (59.56ºN 30.13ºE), 10 and 11.VI.1940, A. Stackelberg (2 ♂♂, ZISP); Lebyazh'ya (59.963ºN 29.421ºE), 11.V.1897, Bianki (1 ♂, 1 ♀, ZISP); same place, 11.VI.1899, Chekini (1 ♀, ZISP); Ligovo (60.223ºN 31.797ºE), 29.V.1903, 15.VI.1904, 3.VIII.1911, G. Yakobson (3 ♂♂, ZISP); Sablino (ca. 59.63ºN 30.76ºE), 29.V.1922, Fridman (1 ♀, ZISP); Tolmachevo (58.856ºN 29.895ºE), 11.VI.1935, Rohdendorf (1 ♂, ZISP); same place, 27.VIII.1957, Nartshuk (1 ♂, ZISP); Shuvalovo (60.047ºN 30.283ºE), 6–14.V.1897, 1.VII.1915, Yakobson (2 ♂♂, 6 ♀♀, ZISP); Yashchera (58.894ºN 29.820ºE), 24.VI.1956, 14–19.VI.1957, 23.VII.1957, 5.VIII.1957, 12–25.VI.1958, 5.VIII.1958, A. Stackelberg (8 ♂♂, 2 ♀♀, ZISP); **Mordovia**: Mordovsky Nature Reserve, River Pushta (54.72ºN, 43.23ºE), 18–21.V.2020, N. Vikhrev (2 ♂♂, ZMUM); Mordovsky Nature Reserve, River Pushta (54.71ºN, 43.22ºE), 8–12.VI.2020, N. Vikhrev (1 ♂, ZMUM); Mordovsky Nature Reserve, River Pushta (54.77090ºN, 43.2133ºE), 18.V.2020, M. Esin (2 ♂♂, 1 ♀, ZMUM); **Moscow and Moscow Oblast**: 35 km NNE of Moscow (56.200ºN 37.833ºE), 26.VI.1993, A.L. Ozerov (1 ♂, ZMUM); Abramtsevo (56.230ºN 37.956ºE), 31.V.1953, 9.VI.1958, E.S. Smirnov (1 ♂, 1 ♀, ZMUM); Burtsevo (55.975ºN 35.586ºE), 2–3.VI.2006, A.L. Ozerov (1 ♂, ZMUM); Golitsyno (55.649ºN 37.011ºE), 27.V.1978, 3.V.1981, A. Shatalkin (1 ♂, 1 ♀, ZMUM); Gorenki (56.211ºN 37.868ºE), 5.VI.1944, E.S. Smirnov (1 ♀, ZMUM); Dmitrov env. (56.316ºN 37.725ºE), 13.VII.2006, 2.VII.2007, 27.V.2009, N.Vikhrev (3 ♂♂, 2 ♀♀, ZMUM); Naro-Fominsk (55.357ºN 36.736ºE), 30.V.2007, D. Gavryushin (2 ♂♂, ZMUM); Poyarkovo (56.009ºN 37.328ºE), 29.V.1999, A. Gusakov (2 ♂♂, ZMUM); Stepan'kovo (55.004ºN 35.624ºE), 3.VI.2006, A.L. Ozerov (3 ♂♂, ZMUM); Ozhigovo (55.450ºN 38.877ºE), 3.VI.2010, D. Gavryushin (1 ♂, ZMUM); Strogino (55.793ºN 37.410ºE), 30.V.2015, N.Vikhrev (1 ♂, ZMUM); Izmaylovo (55.787ºN 37.836ºE), 11.V.2015, A.L. Ozerov (1 ♀, ZMUM); Yakshino env. (55.920ºN 35.573ºE), 15.V.2015, A.L. Ozerov (1 ♂, ZMUM); Sofrino (56.149ºN 37.932ºE), 24.VI.1946, Rohdendorf (1 ♂, ZISP); Bittsa (55.641ºN 37.570ºE), 15.VI.1936, B. Rohdendorf (1 ♂, ZISP); **Murmansk Oblast**: Pulozero (68.333ºN, 33.283ºE), 14.VI.1926, Kapustin (3 ♂♂, 1 ♀, ZISP); Murmansk, Kola Bay (68.951ºN 33.033ºE), 3.VII.1924, Kapustin (1 ♂, 1 ♀, ZISP); **Nizhegorod Oblast**: Dzerzhinsk (56.21ºN 43.62ºE), 16.VIII.2009, N. Dvoretskaya (1 ♀, ZMUM); **North Ossetia – Alania**: Alagir env. (43.015ºN 44.224ºE), 30.VI.1990, A. Shatalkin (1 ♂, ZMUM); Bakhty-Laparyrag ridge (42.938ºN 44.287ºE), 1770 m, 13.VII.1989, 30.VI.1990, A.L. Ozerov, A. Shatalkin (3 ♂♂, 1 ♀, ZMUM); **Novgorod Oblast**: Volkhovmost (59.069ºN 31.765ºE), 22.VI.1975, Gorodkov (2 ♂♂, 2 ♀♀, ZISP); Novgorod, Spas-Nereditsa (58.497ºN 31.311ºE), 22.VI.1975, Gorodkov (3 ♀♀, ZISP); **Novosibirsk Oblast**: Novosibirsk (54.842ºN 83.114ºE), 14.VI.2008, O. Kosterin (7 ♀♀, ZMUM); Novosibirsk, Academgorodok (54.87ºN 83.05ºE), 18–19.VI.2016, N. Vikhrev (1 ♀, ZMUM); **Omsk Oblast**: Achairsky monastery (54.669ºN 73.819ºE), 22.VI.2008, O. Kosterin (1 ♀, ZMUM); **Primorsky Krai**: Kamenushka (43.634ºN 132.222ºE), 14.VII.1983, A. Shatalkin (1 ♂, ZMUM); **Pskov Oblast**: Kharlamova Gora (58.713ºN 28.713ºE), 26.V. and 2.VI.1891, Pleske (1 ♂, 2 ♀♀, ZISP); Dubets Lake (56.966ºN 30.006ºE), 2.VI.1915, N. Kuznetsov (1 ♂, ZISP); **Ryazan' Oblast**: River Ranova (53.715ºN 39.926ºE), 6.VI.2012, K. Tomkovich (1 ♂, ZMUM); Kasimov (54.94ºN 41.34ºE), 25.VII.2013, N. Vikhrev (1 ♂, ZMUM); Kasimov env. (54.969ºN 41.327ºE), 21–24.VII.2013, N. Vikhrev (2 ♂♂, 1 ♀, ZMUM); **Sakhalin Oblast**: Shikotan I., Tserkovnaya Bay (43.75ºN, 146.70ºE), 27–31.VIII.2012, Yu. Sundukov (1 ♂, ZMUM); **Samara Oblast**: Bakhilova Polyana (53.436ºN 49.663ºE), 24.VI.2006, A. Ovchinnikov (1 ♂, 2 ♀♀, ZISP); Seredysh I., Lake Kol'chuzhino (53.452ºN 49.719ºE), 26.VI.2006, E.P. Nartshuk, A. Ovchinnikov (1 ♂, 3 ♀♀, ZISP); **Smolensk Oblast**: Smolenskoe poozer'e National Park (55.511ºN 31.839ºE), 8.VI.1992, Zlobin (1 ♀, ZISP); **Sverdlovsk Oblast**: Polevskoy env., Kosoy brod (56.479ºN 60.329ºE), 5.VII.1981, Zinov'ev (1 ♂, ZISP); **Tyumen' Oblast**: Surgut (61.259ºN 73.418ºE), 25 and 26.VII.1977, Gorodkov (8 ♂♂, 9 ♀♀, ZISP); Tobol'sk (58.208ºN 68.326ºE), VI.1908, B.M. Zhitkov (1 ♀, ZMUM); Labytnangi (66.657ºN 66.391ºE), 24.VII.1973, L. Zimina (1 ♂, ZMUM); (61.73ºN 71.03ºE), 21.VII.2010, K. Tomkovich (2 ♂♂, ZMUM); Shapsha env. (61.085ºN 69.458ºE), 14–16.VII.2010, K. Tomkovich (1 ♀, ZMUM); Mukhino (60.89ºN 68.70ºE), 7–13.VIII.2010, K. Tomkovich (1 ♀, ZMUM); Labytnangi (66.661ºN 66.394ºE), 5 and 20.VIII.1978, Sychevskaya (2 ♂♂, ZISP); same place, 14.VII.1985, Gorodkov (1 ♂, 2 ♀♀, ZISP); Lake Varcha-ty (66.107ºN 63.987ºE), 29.VIII. and 2.IX.1925, Fridolin (1 ♂, 3 ♀♀, ZISP); Neroyka (ca. 64.57ºN 59.67ºE), 1600 m, 1.VII.1990, Malozemov (1 ♂, ZISP); Samarovo (60.968ºN 69.041ºE) [now is a part of Khanty-Mansiysk], 24.VI.1930, N. Plotnikov (1 ♂, ZISP); Saranpaul' (64.257ºN 60.917ºE), 30.VII.1990, Malozemov (1 ♀, ZISP); **Vladimir Oblast**: (56.06ºN 40.46ºE), 5.VI.2011, N. Vikhrev (1 ♂, ZMUM); Vladimir env. (56.05ºN 40.41ºE), 16.VI.2013, N. Vikhrev (1 ♂, 1 ♀, ZMUM); **Vorohezh Oblast**: Georgiu-Dezh [=Liski] (50.979ºN 39.551ºE), 6.IX.1969, Skuf'in (1 ♂, ZISP); Usmanskiy Bor (51.911ºN 39.562ºE), 16.V. and 1.VI.1962, Skuf'in (2 ♂♂, ZISP); Khopersky Nature Reserve (ca. 51.191ºN 41.706ºE), 7.VII.1962, Skuf'in (1 ♂, ZISP); Varvarino (51.209ºN 41.719ºE), 10.VIII.1969, Dorovskaya (1 ♀, ZISP); **Yakutia**: Yakutsk env. (62.042ºN 129.708ºE), 16–17.VI.1962, Zhelokhovtsev (1 ♂, 1 ♀, ZMUM); same place, 24.VI.1957, Gorodkov (1 ♂, 1 ♀, ZISP); Arylakh (62.385ºN 114.350ºE), 8.VII.1987, Zlobin (1 ♂, ZISP); Mikhaylovka, 60 km NE of Amga (61.214ºN 132.681ºE), 17.VII.1987, Bagachanova (1 ♂, ZISP); Khaptagay (61.787ºN 129.795ºE), 7.VI.1974 and 14.VI.1975, Bagachanova (1 ♂, 1 ♀, ZISP); Oktemtsy env. (61.672ºN 129.417ºE), 5.VI. 1977, Maksimova (2 ♂♂, 1 ♀, ZISP); **Yaroslavl' Oblast**: Berditsyno (57.455ºN 40.107ºE), 2.VII.1908, A. Yakovlev (1 ♂, ZISP).

ADDITIONAL MATERIAL EXAMINED. **Georgia**: Bakuriani (41.752ºN 43.530ºE), 2200 m, 23.V.1972, Zinov'eva (1 ♀, ZISP); Tambovka (41.481ºN 43.803ºE), 26.VI.1909, Berg (2 ♂♂,



Figs 113–121. *Cordilura sibirica* Gorodkov (113–115), *C. sidorenkoi* Ozerov et Krivosheina (116–118) and *C. sifneri* Ozerov (119–121): 113, 116, 119 — male sternite 5; 114, 117, 120 — epandrium and surstyli, lateral view; 115, 118, 121 — same, dorsal view. 116–118— after Ozerov & Krivosheina, 2012b, figs 1, 3, 4.

Рис. 113–121. *Cordilura sibirica* Gorodkov (113–115), *C. sidorenkoi* Ozerov et Krivosheina (116–118) и *C. sifneri* Ozerov (119–121): 113, 116, 119 — стернит 5 самца; 114, 117, 120 — эпандрий и сурстили, сбоку; 115, 118, 121 — то же, сверху. 116–118— по Ozerov & Krivosheina, 2012b, figs 1, 3, 4.

ZISP); **Kazakhstan**: Bosaga (47.88ºN 72.956ºE), 23.V.1959, Grunin (3 ♂♂, 2 ♀♀, ZISP).

DIAGNOSTIC DESCRIPTION. Male (Fig. 1). Female. Body-length 5.8–9.6 mm. *Head*. Frontal vitta from reddish yellow to blackish, with whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial yellow with whitish reflection. Gena yellow or brownish. Postcranium black, grey dusted. 3 orbital and 2–4 frontal setae present. Antenna black. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel (Fig. 3). Palpus black. *Thorax* black, greyish dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars 1+(1–2), supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* greyish dusted. Fore coxa black. Femora of all legs black; tibiae and tarsi of all legs yellow; tarsomeres 2–4 of all or only fore legs with black spot basally (Fig. 11). *Wing* tinged with yellowish; veins brownish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, greyish dusted. Male sternite 4 trapezoid, approximately 2 times as long as wide (Fig. 14). Male sternite 5, epandrium and surstyli as in Figs 104–106.

DISTRIBUTION. Russia: Altai, Arkhangelsk Oblast, Bashkiria, Buryatia, Chelyabinsk Oblast, Crimea, Irkutsk Oblast, Kabardino-Balkaria, Karelia, Komi, Krasnodar Krai, Krasnoyarsk Krai, Kursk Oblast, Leningrad Oblast, Mordovia, Moscow Oblast, Murmansk Oblast, Nizhegorod Oblast, North Ossetia – Alania, Novgorod Oblast, Novosibirsk Oblast, Omsk Oblast, Primorsky Krai, Pskov Oblast, Ryazan' Oblast, Sakhalin Oblast, Samara Oblast, Smolensk Oblast, Sverdlovsk Oblast, Tyumen' Oblast, Vladimir Oblast, Vorohezh Oblast, Yakutia, Yaroslavl' Oblast. — Europe, Georgia (**first record**), Kazakhstan (**first record**), Iran [Khaghaninia & Gharajedaghi, 2014: 390], Mongolia [Gorodkov, 1986: 15], China [Sun, 1993: 440].

Cordilura sagittifera Gorodkov, 1974
Figs 107–109.

sagittifera Gorodkov, 1974: 388 (*Cordilura*). Type-locality: 6 km E of Kyren, 700 m (ca. 51.677ºN 102.214ºE) (Russia, Buryatia).

REMARK. This species was described on material from Buryatia and Irkutsk Oblast [Gorodkov, 1974: 388] and later registered from Amur Oblast and Primorsky Krai [Ozerov, Krivosheina, 2014: 212], also from Yakutia [Bagachanova *et al.*, 2016: 779].

MATERIAL EXAMINED. **Altai**: Lake Kolyvanskoe (51.363ºN 82.191ºE), 8.IX.2007, O. Kosterin (1 ♂, ZMUM); **Amur Oblast**: Zeysky Nature Reserve, cordon "52 km" (54.087ºN 126.871ºE), 7.VIII.1981, A. Ozerov (1 ♂, 1 ♀, ZMUM); **Bashkiria**: Beloretsk (54.051ºN 58.268ºE), 12.VIII.2012, D. Gavryushin (1 ♂, ZMUM); **Buryatia**: Khargun, 6 km E of Kyren (51.677ºN, 102.214ºE), Sayan Mountains, 700 m, 11.VII.1965, Gorodkov (holotype ♂, 1 paratype ♀, ZISP); **Novosibirsk Oblast**: Novosibirsk env. (54.842ºN 83.114ºE), 9–10.IX.2009, 14.VI.2008, O. Kosterin (2 ♂♂, ZMUM); same place (54.75ºN 83.01ºE), 11.V.2008, O. Kosterin (1 ♂, ZMUM); **Primorsky Krai**: Lake Khanka (45.06ºN 131.99ºE), 4–6.VII.2014, N. Vikhrev (1 ♂, ZMUM); **Yakutia**: Alagar-Khoy, 18 km N of Tyungyulyu (62.346ºN 130.649ºE), 21.VII.1985, Bagachanova (1 ♂, ZISP); Mikhaylovka, 60 km NE of Amga (61.214ºN 132.681ºE), 7.VII.1987, Bagachanova (3 ♀♀, ZISP); Yakutsk env. (62.0345ºN 129.618ºE), 22.V.–15.VIII.1900, Olenin (2 ♂♂, ZISP); **Zabaykalsky Krai**: Ulyatuy (51.168ºN 116.227ºE), 16.VIII.2016, A. Medvedev (1 ♀, ZMUM).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 6.0–7.6 mm. *Head*. Frontal vitta black, with whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial yellowish with whitish reflection. Gena blackish. Postcranium black, grey dusted. 3 orbital and 2–3 frontal setae present. Antenna black. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus black. *Thorax* black, delicately grey dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including small scapular seta), intra-alars (0–1)+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae or absent. *Legs* greyish dusted. Fore coxa black; femora of all legs black; tibiae and tarsi of all legs yellow. *Wing* tinged with brownish; veins blackish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, delicately grey dusted. Male sternite 4 rectangular, slightly wider than long. Male sternite 5, epandrium and surstyli as in Figs 107–109.

DISTRIBUTION. Russia: Altai, Amur Oblast, Bashkiria, Buryatia, Novosibirsk Oblast, Primorsky Krai, Yakutia, Zabaykalsky Krai. — Mongolia [Gorodkov, 1974: 388].

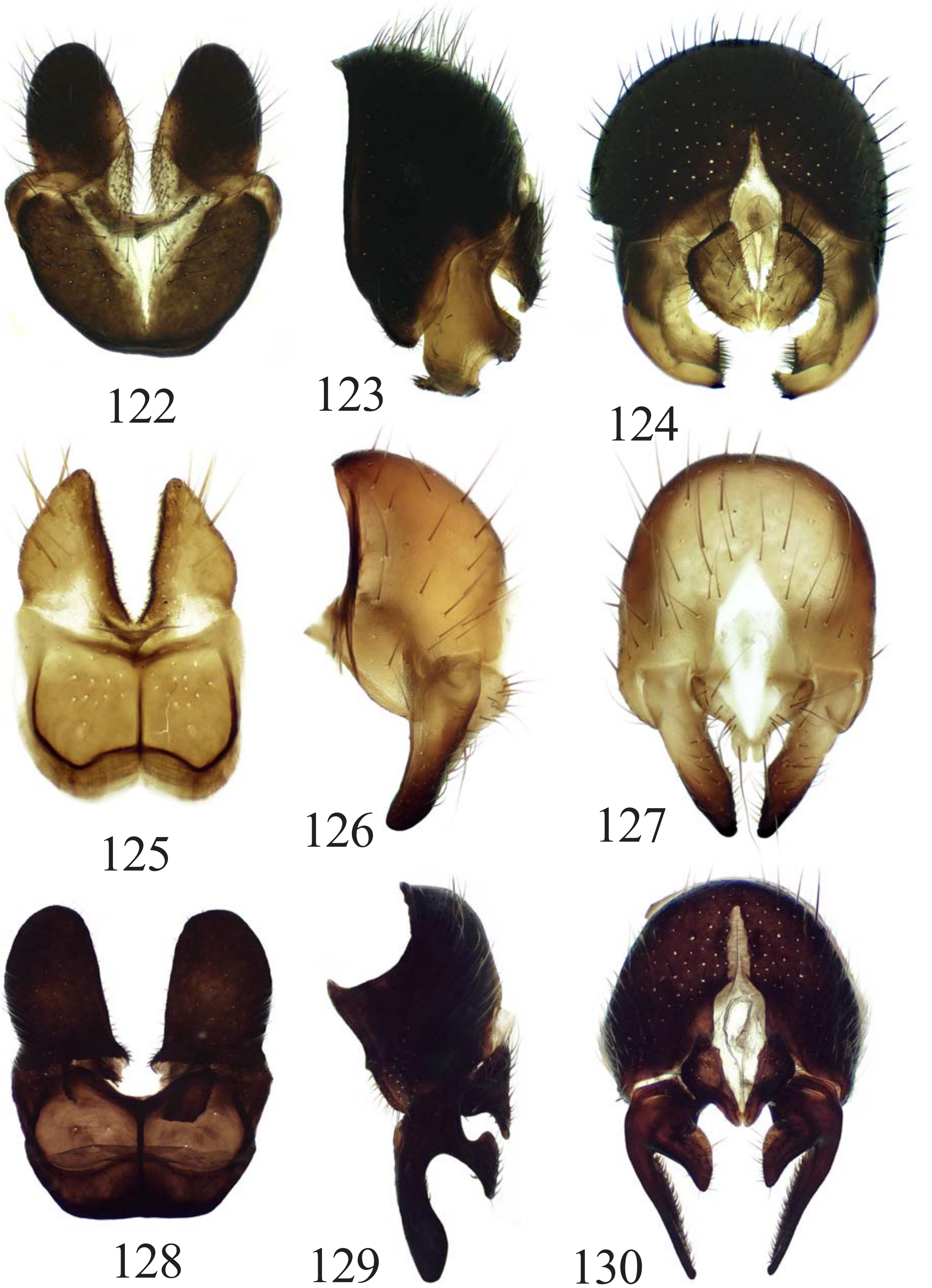
Cordilura shatalkini Ozerov, 1997
Figs 20, 110–112.

shatalkini Ozerov, 1997: 1426 (*Cordilura*). Type-locality: Ryazanovka (Russia, Primorsky Krai).

REMARK. This species was registered in Russia from Primorsky Krai [Ozerov, 1997: 1426; Ozerov, Krivosheina, 2014: 212].

MATERIAL EXAMINED. **Primorsky Krai**: Shkotovo env., River Maykhe [=Artemovka] (43.345ºN 132.305ºE), 4.VI.1927, Stackelberg (1 ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 6.2–7.0 mm. *Head*. Frontal vitta and fronto-orbital plate yellow. Face, parafacial and gena yellowish, with weak whitish reflection. Postcranium yellow in lower part and black in upper half. 2 orbital and 2 frontal setae present. Antenna pale yellow. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus yellow. *Thorax* black completely or pleural sclerites yellow, only mediotergite black, also anepimeron and katatergite partly blackish. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars (0–1)+(0–1), supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae. *Legs* shining, yellow. *Wing* tinged with brownish, with a distinct brown shadow apically (Fig. 20); veins blackish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, subshining. Male sternite 4 trapezoid, approximately 2



Figs 122–130. *Cordilura socialis* (Becker) (122–124), *C. tartariana* Ozerov (125–127) and *C. ustulata* (Zetterstedt) (128–130): 122, 125, 128 — male sternite 5; 123, 126, 129 — epandrium and surstyli, lateral view; 124, 127, 130 — same, dorsal view.

Рис. 122–130. *Cordilura socialis* (Becker) (122–124), *C. tartariana* Ozerov (125–127) и *C. ustulata* (Zetterstedt) (128–130): 122, 125, 128 — стернит 5 самца; 123, 126, 129 — эпандрий и сурстили, сбоку; 124, 127, 130 — то же, сверху.

times as long as wide. Male sternite 5, epandrium and surstyli as in Figs 110–112.

DISTRIBUTION. Russia: Primorsky Krai.

Cordilura sibirica Gorodkov, 1974
Figs 113–115.

sibirica Gorodkov, 1974: 388 (*Cordilura*). Type-locality: 6 km E of Kyren, 700 m (ca. 51.677ºN 102.214ºE) (Russia, Buryatia).

REMARK. This species is known from a single male specimen [Gorodkov, 1974: 388].

MATERIAL EXAMINED. **Buryatia**: Khargun, 6 km E of Kyren (51.677°N 102.214°E), Sayan Mountains, 700 m, 11.VII.1965, Gorodkov (holotype ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Body-length 7.5 mm. *Head*. Frontal vitta blackish, with whitish reflection; fronto-orbital plate black, with whitish reflection. Face yellowish with whitish reflection. Parafacial brownish, gena blackish. Postcranium black, grey dusted. 3 orbital and 3–4 frontal setae present. Antenna black. Postpedicel approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus black. *Thorax* black, grey dusted. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars 0+(1–2), supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae or absent. *Legs* greyish dusted. Fore coxa black; femora of all legs black; tibiae and tarsi of all legs yellow. *Wing* tinged with brownish; veins blackish. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black, grey dusted. Male sternite 4 rectangular, slightly longer than wide. Male sternite 5, epandrium and surstyli as in Figs 113–115.

Female unknown.

DISTRIBUTION. Russia: Buryatia.

Cordilura sidorenkoi Ozerov et Krivosheina, 2012
Figs 116–118.

sidorenkoi Ozerov, Krivosheina, 2012b: 2 (*Cordilura*). Type-locality: Lazovsky Nature Reserve (43.005ºN, 134.123ºE) (Russia, Primorsky Krai).

REMARK. The species is known from the type-locality only.

MATERIAL EXAMINED. **Primorsky Krai**: Lazovsky Nature Reserve (43.005ºN 134.123ºE), 22–23.V.2007, V. Sidorenko (holotype ♂, ZMUM).

DIAGNOSTIC DESCRIPTION. Male. Body-length 6.8 mm. *Head*. Frontal vitta and orbital plate yellow, whitish dusted. Face, parafacial and gena yellow, whitish dusted. Postcranium blackish in dorsal half (with black setae and setulae) and yellowish in ventral half (covered with yellow hairs). 2 orbital and 2 frontal setae present. Antenna yellow. Postpedicel approximately 2 times as long as wide. Arista yellow basally and black apically, plumose in basal half. Palpus yellow. Scutum black, greyish dusted, with yellowish median stripe between dorsocentral setae along entire scutum and with lateral yellowish stripes along each supra-alar lines. Pleura greyish dusted, mostly yellow, but anepimeron, katatergite, anatergite and mediotergite black, and meron blackish. Acrostichals setulose usually in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars 1+0, supra-alars 1+1, 2 postpronotals. Scutellum with a pair of strong discal setae and a pair of apical setulae. *Legs* entirely yellow. *Wing* tinged with yellowish, with a distinct brown shadow apically; veins brown. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* black in ground colour. Sternite 4 trapezoid, slightly longer than wide. Sternite 5, epandrium and surstyli as in Figs 116–118.

Female unknown.

DISTRIBUTION. Russia: Primorsky Krai.

Cordilura sifneri Ozerov, 2007
Figs 9, 119–121.

sifneri Ozerov, 2007b: 126 (*Cordilura*). Type-locality: 40 km SE of Ussuriysk (Russia, Primorsky Krai).

REMARK. Recorded from Primorsky Krai of Russia only [Ozerov, 2007b: 126; Ozerov, Krivosheina, 2014: 212].

MATERIAL EXAMINED. **Primorsky Krai**: Lazovsky Nature Reserve, cordon "Amerika" (43.283ºN 134.044ºE), 13–18.VII.1986, A.L. Ozerov (8 ♀♀, ZMUM); Kedrovaya Pad' Nature Reserve (43.104ºN 131.512ºE), 8–16.VI.2007, A. Ovchinnikov (1 ♂, 1 ♀, ZISP); Ussuriysky Nature Reserve (ca. 43.635°N 132.311°E), 13–14.VI.1993, Belokobyl'skiy (1 ♂, ZISP); 30 km SE of Ussuriysk, Ussuriysky Nature Reserve (43.635ºN 132.311ºE), 11–13.VI.1993, Belokobyl'skiy (4 ♂♂, 3 ♀♀, ZISP).

DIAGNOSTIC DESCRIPTION. Male, female. Body-length 4.8–6.5 mm. *Head*. Frontal vitta yellow, matt; fronto-orbital plate blackish, greyish dusted. Face, parafacial and gena yellowish white. Postcranium greyish dusted, yellow in upper half and whitish in lower half. 2 orbital and 2–3 frontal setae present. Antenna yellow. Postpedicel approximately 2.5 times as long as wide. Arista nearly bare. Palpus pale yellow. *Thorax* yellow; scutum with two dark rows, each exterior from dorsocentral lines; mediotergite with two dark stripes on margins; anepisternum with dark band on upper margin in some specimens. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars 1+(1–2), supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae and a pair of apical setulae. *Legs* yellow; usually tarsomere 3 in apical half, tarsomeres 4 and 5 of mid leg, and tarsomere 5 of hind leg dark brownish in male; all tarsi yellow in female. *Wing* tinged with light brownish; veins brownish. Vein R_1 setulose on apical third or half of dorsal surface. *Abdomen* yellow in ground color, slightly darkened along border between tergites in male; more darkened in female. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 119–121.

DISTRIBUTION. Russia: Primorsky Krai.

Cordilura socialis (Becker, 1894)
Figs 122–124.

socialis Becker, 1894: 90 (*Cordylura*). Type-locality: "C. pudica. Zett. Dipt. Sc. V. 1998, 3 ["Suecia meridionali... in Scania...

ad Hafniam" (Sweden, Denmark)]; Rond., Prodr. VII, 14, 4.["unicum exemplar germanicum" (Germany)]".

freyi Hackman, 1956: 16 (*Cordylura*). Type-locality: "Ks: Kusamo, Tavajärvi" (Finland).

REMARK. Noted for North of European part of Russia without indicating specific locality [Gorodkov, 1986: 15].

MATERIAL EXAMINED. **Arkhangelsk Oblast**: Nar'yan-Mar (67.631ºN, 52.985ºE), 12.VII.2008, N.E. Vikhrev (1 ♀, ZMUM); **Moscow Oblast**: Burtsevo env. (55.995ºN 35.617ºE, 55.978ºN 35.590ºE), 9–10.V.2008, 4–8.V.2011, A.L. Ozerov (3 ♂♂, 4 ♀♀, ZMUM); Andreevskoe env. (55.978ºN 35.588ºE, 55.995ºN 35.617ºE), 14 and 20.V.2007, A.L. Ozerov (4 ♂♂, ZMUM).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 5.4–6.9 mm. *Head*. Frontal vitta dark brown, matt; fronto-orbital plate black, greyish dusted. Face, parafacial and gena yellowish with whitish reflection. Postcranium black, greyish dusted. 3 orbital and 4–5 frontal setae present. Scapus and pedicel dark brown; postpedicel black approximately 1.5–2 times as long as wide. Arista pubescent, the longest hairs approximately equal to 1/3–1/2 width of postpedicel. Palpus black. *Thorax* black, delicately greyish dusted. Acrostichals setulose in two rows, dorsocentrals (3–4)+3 (including scapular seta), intra-alars 1+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* delicately greyish dusted. Femora black, tibiae and tarsi of all legs yellow. *Wing* tinged with light brownish; veins brownish. Vein R_1 bare on apical third of dorsal surface. *Abdomen* black, greyish dusted. Male sternite 4 rectangular, wider than long. Male sternite 5, epandrium and surstyli as in Figs 122–124.

DISTRIBUTION. Russia: Arkhangelsk Oblast, Moscow Oblast. — Europe.

Cordilura tartariana Ozerov, 2007
Figs 125–127.

tartariana Ozerov, 2007b: 126 (*Cordilura*). Type-locality: Zeya Town (Russia, Amur Oblast).

REMARK. The species is known from Amur Oblast, Khabarovsk Krai and Primorsky Krai [Ozerov, 2007: 126; Ozerov, Krivosheina, 2014: 212].

MATERIAL EXAMINED. **Amur Oblast**: Zeya Town (53.748ºN 127.261ºE), 23.VI.–8.VII.1978, 27–31.VII.1982, A. Shatalkin (5 ♂♂, 8 ♀♀, ZMUM); Zeysky Nature Reserve, cordon "34 km" (53.989ºN 127.073ºE), 23–30.VII.1981, A. Ozerov, A. Shatalkin, O. Gorbunov (11 ♀♀, ZMUM); Zeysky Nature Reserve, cordon "52 km" (54.087ºN 126.871ºE), 5 and 10.VII.1981, A. Ozerov, A. Shatalkin (1 ♂, 1 ♀, ZMUM); **Khabarovsk Krai**: River Gobilli (49.22ºN 138.25ºE), 8.VI.2014, N. Vikhrev (1 ♀, ZMUM); **Primorsky Krai**: Kedrovaya Pad' Nature Reserve (43.104ºN 131.512ºE), 10.V.1962, Rasnitsyn (1 ♂, ZISP); Andreevka (ca. 42.64ºN 131.13ºE), 25–30.VI.2014, N. Vikhrev (4 ♀♀, ZMUM); Sikhote-Alin Nature Reserve, Blagodatnoe (44.975ºN 136.526ºE), 1–6.VI.2018, M. Sergeev (3 ♂♂, ZMUM).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 5.1–6.4 mm. *Head*. Frontal vitta yellow, matt; fronto-orbital plate blackish, greyish dusted. Face, parafacial and gena yellowish white. Postcranium greyish dusted, blackish in upper half and whitish in lower half in male and yellow in upper half and whitish in lower half in female. 3 orbital and 3–4 frontal setae present. Antenna black as a rule completely in male; scapus and pedicel usually yellow in female. Postpedicel approximately 2.5 times as long as wide. Arista nearly bare. Palpus pale yellow. *Thorax* yellow in ground color, greyish dusted; anepisternum, anepimeron and mediotergite in some specimens partly blackish. Acrostichals setulose in two rows, dorsocentrals 3+3 (including scapular seta), intra-alars 1+2, supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae and a pair of apical setulae. *Legs* yellow completely. *Wing* tinged with light brownish; veins brown. Vein R_1 setulose on apical third of dorsal surface. *Abdomen* blackish with greyish pollen; female tergite 6 brownish. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 125–127.

DISTRIBUTION. Russia: Amur Oblast, Khabarovsk Krai, Primorsky Krai.

Cordilura ustulata (Zetterstedt, 1838)
Figs 5, 128–130.

ustulata Zetterstedt, 1838: 727 (*Cordylura*). Type-locality: "Lapponia Umensis... Tornensis... Nordlandiae" (Norway, Sweden).

melanacra Loew, 1873: 247 (*Cordylura*). Type-locality: "Rosenthal" [now Rózanka, part of Międzylesie, near Kłodzko (Poland)].

REMARKS. The species was recorded from Siberia [Ozerov, Barkalov, 2014: 561], Amur Oblast, Primorsky Krai and Sakhalin Oblast [Ozerov, Krivosheina, 2014: 212]. Noted by Gorodkov [1986: 17] for north of European part and Siberia without indicating specific locality.

MATERIAL EXAMINED. **Amur Oblast**: River Nyukzha (56.574ºN 121.652ºE), 18.VI.1976, Soboleva (1 ♂, 3 ♀♀, IBSS); **Arkhangelsk Oblast**: Nenetsky Nature Reserve, cordon "Bol'shoy Gusinets" (68.175ºN, 53.645ºE), 10–11.VII.2008, N.E. Vikhrev, A.L. Ozerov (5 ♂♂, 6 ♀♀, ZMUM); the lower reaches of the River Pechora (68.334ºN, 53.304ºE), 11.VII.2008, A.L. Ozerov (1 ♂, ZMUM); 73 km NW of Nar'yan-Mar (ca. 67.981ºN 51.608ºE), 3.VIII.1978, Gorodkov (1 ♂, ZISP); **Chelyabinsk Oblast**: Zlatoust Miass (55.166ºN 59.666ºE), 2.VI.1936, Zhelokhovtsev (2 ♀♀, ZMUM); **Krasnoyarsk Krai**: Taymyr, Taymyrsky Nature Reserve, cordon Ary-Mas (72.5ºN, 101.94ºE), 14 m, 8.VII.2010, O. Khruleva (1 ♂, ZMUM); Khatanga (71.975ºN, 102.482ºE), 11–12.VII.1970, V. Zherikhin, A. Ponamorenko, A. Rasnitsyn, I. Sukacheva (1 ♂, ZMUM); Kryuchkovo station (56.096ºN 62.109ºE), 14–23.VII.2009, K. Tomkovich (1 ♀, ZMUM); Medvezhiy (69.284ºN 88.148ºE), Norilsk env., 6.VII.1967, Gorodkov (1 ♂, ZISP); **Leningrad Oblast**: Yashchera (58.894ºN 29.820ºE), 8.VI.1958, A. Stackelberg (1 ♀, ZISP); **Moscow Oblast**: Dmitrov env. (56.316ºN 37.725ºE), 19.V.2006, N.Vikhrev (1 ♀, ZMUM); **Murmansk Oblast**: Tumannyy (68.883ºN 35.693ºE), 14.VII.1974, Kasparyan (1 ♂, ZISP); Vud'yavr (ca. 67.64ºN 33.644ºE), 27.VI. and 6.VII.1930, Fridolin (1 ♂, 1 ♀, ZISP); **Primorsky Krai**: Lazovsky Nature Reserve, cordon "Korpad" (43.252ºN 134.126ºE), 19–20.V.2007, V. Sidorenko (1 ♀, ZMUM); Vinogradovka (43.762ºN 132.951ºE), 20.VII.1929, Kirichenko (1 ♂, ZISP); **Tyumen' Oblast**: Labytnangi env. (66.661ºN 66.394ºE), 17.VII.1971, Ol'shvang (4 ♂♂, 6 ♀♀, ZISP); Neroyka (ca. 64.57ºN 59.67ºE), 600 m, 17.VI.1989, Malozemov (1 ♂, ZISP); same place, 500 m, 12–15.VII.1990, Malozemov (1 ♀, ZISP); **Sakhalin Oblast**: Shikotan I., Tserkovnaya Bay (43.75ºN 146.70ºE), 2–8.VI.2012, Yu. Sundukov (1 ♂, ZMUM); **Yakutia**: Pokhodsk (69.079ºN 160.961ºE), 5.VII.1980, Bagachanova (1 ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 5.6–7.0 mm. *Head*. Frontal vitta black or dark brown, sometimes reddish yellow apically; fron-



Figs 131–133. *Cordilura zaitzevi* Gorodkov: 131 — male sternite 5; 132 — epandrium and surstyli, lateral view; 133 — same, dorsal view.

Рис. 131–133. *Cordilura zaitzevi* Gorodkov: 131 — стернит 5 самца; 132 — эпандрий и сурстили, сбоку; 133 — то же, сверху.

to-orbital plate black, subshining or greyish dusted. Face and parafacial yellow with whitish reflection. Gena from yellow to brown. Postcranium black, delicately greyish dusted. 3 orbital and 3–5 frontal setae present. Antenna blackish. Postpedicel approximately 1.5 times as long as wide. Arista nearly bare (Fig. 5). Palpus yellow. *Thorax* black, delicately greyish dusted, only scutum usually mostly subshining. Acrostichals absent, dorsocentrals 3+3 (including scapular seta), intra-alars 0+(0–2) (usually absent), supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal and a pair of strong apical setae. *Legs* subshining. Femora black, fore tibia and tarsi of all legs yellow, mid and hind tibiae from yellow to black. *Wing* tinged with yellowish; veins yellowish. Vein R_1 bare or with several setulae on apical third of dorsal surface. Apex of wing usually darkened. *Abdomen* black, delicately greyish dusted. Male sternite 4 rectangular, longer than wide. Male sternite 5, epandrium and surstyli as in Figs 128–130.

DISTRIBUTION. Russia: Amur Oblast, Arkhangelsk Oblast, Chelyabinsk Oblast, Krasnoyarsk Krai, Leningrad Oblast, Moscow Oblast, Murmansk Oblast, Primorsky Krai, Tyumen' Oblast, Sakhalin Oblast, Yakutia. — Europe, Mongolia [Šifner, 1975: 220]; North America.

Cordilura zaitzevi Gorodkov, 1974
Figs 131–134.

zaitzevi Gorodkov, 1974: 386 (*Cordilura*). Type-locality: Songino, 1300 m, Central aimak (Mongolia).

REMARK. The species was recorded in Russia from Buryatia and Yakutia [Gorodkov, 1974: 386], from Amur Oblast and Primorsky Krai [Ozerov, Krivosheina, 2014: 212] and from Yakutia [Bagachanova *et al.*, 2016: 779].

MATERIAL EXAMINED. **Altai**: 10 km E of Cheke-Taman Pass, River Bol'shoy Il'gumen' (50.613ºN 86.469ºE), 28.VII.2006, A. Ovchinnikov (1 ♀, ZISP); Kuray env. (50.233ºN 87.930ºE), 25.VII.2006, A. Ovchinnikov (4 ♀♀, ZISP); **Amur Oblast**: Blagoveshchensk (50.280ºN 127.535ºE), 17.VIII.1982, A. Leley (1 ♀, ZISP); Zeya Town (53.748ºN 127.261ºE), 18 and 20.VII.1982, A. Ozerov, O. Gorbunov (2 ♂♂, 1 ♀, ZMUM); **Khakassia**: Borets (54.46ºN 90.36ºE), 29.VI.2011, K. Tomkovich (2 ♂♂, ZMUM); **Novosibirsk Oblast**: Koynikha (54.568ºN 83.252ºE), 13.VIII.1977, Gorodkov (4 ♂♂, 4 ♀♀, ZISP); **Primorsky Krai**: River Bol'shaya Ussurka, 20 km NW of Mel'nichnoe (45.548ºN 135.347ºE), 2.VIII.1986, A. Leley (1 ♂, IBSS); Kamenushka (43.634ºN 132.222ºE), 9 and 11.IX.1983, A.L. Ozerov (3 ♂♂, ZMUM); Shkotovskoe plateau (ca. 43.4589ºN 132.6324ºE), 25.VIII.1962, Nartshuk (1 ♀, ZISP); **Yakutia**: Pokrovsk (61.467ºN 129.101ºE), 21.VII.1986, Makarkin (1 ♂, IBSS); Mikhaylovka, 60 km NE of Amga (61.214ºN 132.681ºE), 23.VII.1986, Sivtsev (2 ♂♂, 3 ♀♀, ZISP); same place, 17.VII.1987, Bagachanova (12 ♂♂, 14 ♀♀, ZISP); same place, 5.VIII.1987, Zlobin (2 ♀♀, ZISP); Alagar-Khoy, 18 km N of Tyungyulyu (62.346ºN 130.649ºE), 21.VII.1985, Bagachanova (1 ♂, 2 ♀♀, ZISP); 50 km ESE of Yakutsk (62.183ºN 130.7ºE), 10.VII.1994 and 6.VII.1996, Bagachanova (1 ♂, 2 ♀♀, ZISP); Usun-Kyuel' env. (62.870ºN 130.832ºE), 18.VII.1997, Bagachanova (1 ♀, ZISP); Yakutsk env., Chochur-Muran (62.034ºN 129.618ºE), 2.VII.2008, A. Ovchinnikov (1 ♂, 1 ♀, ZISP); Yakutsk, Botanical Garden (62.023ºN 129.614ºE), 14.VII.1976, V. Kovalev (1 ♂, ZISP); same place, 18.VII.1974, Nartshuk (3 ♂♂, 1 ♀, ZISP); Yakutsk (62.023ºN 129.614ºE), 10.VIII.1987, Zlobin (1 ♂, ZISP).

DIAGNOSTIC DESCRIPTION. Male. Female. Body-length 5.8–7.1 mm. *Head*. Frontal vitta black with weak whitish reflection; fronto-orbital plate black, greyish dusted. Face and parafacial yellowish, with whitish reflection. Gena blackish. Postcranium black completely, greyish dusted. 3 orbital and 2–3 frontal setae present. Scapus and pedicel from yellowish to blackish; postpedicel blackish, approximately 2 times as long as wide. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Palpus yellow or brownish (female). *Thorax* black, delicately greyish dusted. Acrostichals absent, dorsocentrals 3+3 (including scapular

seta), intra-alars 0+(0–2), supra-alars 1+2, 2 postpronotals. Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae. *Legs* greyish dusted. Fore coxa white. Femora of all legs black; tibiae and tarsi of all legs yellow. *Wing* tinged with brownish; veins dark yellow. Vein R_1 bare or with 1–3 setulae on apical third of dorsal surface. *Abdomen* black, greyish dusted. Male sternite 4 triangular (Fig. 15). Male sternite 5, epandrium and surstyli as in Figs 131–133.

Photo of female ovipositor in lateral view was given by Ovchinnikov [2009: 632].

DISTRIBUTION. Russia: Altai, Amur Oblast, Buryatia, Khakassia, Novosibirsk Oblast, Primorsky Krai, Yakutia. — Kazakhstan and Mongolia [Gorodkov, 1974: 386].

Key to the species of *Cordilura* Fallén of Russia

1. Scutellum with a pair of strong discal and a pair of strong apical setae (*e.g.*, Fig. 13) 2
— Scutellum with a pair of strong discal setae only; apical scutellar setae as setulae or absent (*e.g.*, Fig. 12) 15
2. Palpus yellow 3
— Palpus black or dark brown 4
3. Arista plumose, the longest hairs approximately equal to the width of postpedicel. Frontal vitta yellow. Male sternite 5, epandrium and surstyli as in Figs 84–86 .... *C. picticornis* (Loew)
— Arista nearly bare (Fig. 5). Frontal vitta black. Apex of wing usually darkened. Male sternite 5, epandrium and surstyli as in Figs 128–130 ...... *C. ustulata* (Zetterstedt)
4. Postpedicel with 1–2 additional long setae externally from plumose arista (Fig. 6). Male sternite 5, epandrium and surstyli as in Figs 45–47 .... *C. ciliata* (Meigen)
— Postpedicel without additional setae 5
5. Legs, including tarsi black completely. Male sternite 5, epandrium and surstyli as in Figs 39–41 .... *C. atrata* (Zetterstedt)
— At least fore tibiae and tarsi yellow 6
6. Tarsomeres 2–4 darkened basally of at least the fore leg (*e.g.*, Fig. 11) 7
— Tarsi ventrally unicolor, yellow or brownish 8
7. Arista pubescent, the longest hairs approximately equal to 1/3–1/2 width of postpedicel (Fig. 4). Male sternite 5, epandrium and surstyli as in Figs 27–29 .... *C. aemula* (Collin)
— Arista plumose, the longest hairs approximately equal to the width of postpedicel (Fig. 3). Male sternite 5, epandrium and surstyli as in Figs 104–106 .... *C. rufipes* (Meigen)
8. Arista plumose or pubescent, longest hairs exceeding greatest diameter of arista (*e.g.*, Figs 3, 4, 6) 9
— Arista nearly bare, longest hairs not exceeding greatest diameter of arista (*e.g.*, Fig. 5) 12
9. Scutum with 2 postsutural intra-alar setae; presutural acrostichal hairs present 10
— Scutum with 1 postsutural intra-alar seta only; presutural acrostichal hairs absent. Male sternite 5, epandrium and surstyli as in Figs 24–26 .... *C. aberrans* (Becker)
10. Presutural intra-alar seta present. Hind tibia yellow 11
— Presutural intra-alar seta absent. Hind tibia black or dark brown. Male sternite 5, epandrium and surstyli as in Figs 101–103 .... *C. rufimana* (Meigen)
11. Tarsi ventrally yellow. Male sternite 5, epandrium and surstyli as in Figs 90–92 .... *C. pudica* (Meigen)
— Tarsi ventrally dark brown (Fig. 10). Male sternite 5, epandrium and surstyli as in Figs 69–71 .... *C. monochroma* Ozerov et Krivosheina
12. Legs shining. Frontal vitta yellow 13
— Legs greyish dusted. Frontal vitta dark brown. Male sternite 5, epandrium and surstyli as in Figs 122–124 .. .. *C. socialis* Becker
13. 3 orbital setae present 14
— 2 orbital setae present. Male sternite 5, epandrium and surstyli as in Figs 54–56 .... *C. grunini* Ozerov
14. Male sternite 5, epandrium and surstyli as in Figs 48–50 .... *C. fulvifrons* Ozerov
— Male sternite 5, epandrium and surstyli as in Figs 87–89 .... *C. proboscidea* (Zetterstedt)
15. Arista plumose or pubescent, longest hairs exceeding greatest diameter of arista (*e.g.*, Figs 3, 4, 6) 16
— Arista nearly bare, longest hairs not exceeding greatest diameter of arista (*e.g.*, Fig. 5) 30
16. Fore coxa black 17
— Fore coxa white or yellowish 21
17. Presutural supra-alar seta usually absent or setulose; intra-alar setae absent. Vein R_1 bare on apical third of dorsal surface. Male sternite 5, epandrium and surstyli as in Figs 60–62 .... *C. kakaberrans* Ozerov
— Presutural supra-alar seta present; (0–1)+(1–2) intra-alar setae present. Vein R_1 setulose on apical third of dorsal surface (*e.g.*, Fig. 19) 18
18. Tibiae and tarsi of all legs yellow 19
— Tibiae and tarsi of all legs black. Male sternite 5, epandrium and surstyli as in Figs 81–83 ....*C. picipes* (Meigen)
19. Presutural acrostichal hairs present 20
— Presutural acrostichal hairs absent. Male sternite 5, epandrium and surstyli as in Figs 63–65 .... *C. kosterini* Ozerov et Krivosheina
20. Male sternite 5, epandrium and surstyli as in Figs 107–109 .... *C. sagittifera* Gorodkov
— Male sternite 5, epandrium and surstyli as in Figs 57–59 .... *C. impudica* Rondani
— Male sternite 5, epandrium and surstyli as in Figs 113–115 .... *C. sibirica* Gorodkov
21. Mid and hind femora bicolor: black in apical part and yellow in basal half or third. Male sternite 5, epandrium and surstyli as in Figs 42–44 ...... *C. bicoloripes* Ozerov
— Mid and hind femora yellow completely (sometimes darkened dorsally) or black completely 22
22. Femora of all legs yellow 23
— Femora of all legs black 28
23. Postpedicel bicolor: yellow basally and blackish in apical part. Male sternite 5, epandrium and surstyli as in Figs 51–53 .... *C. fuscipes* (Zetterstedt)
— Postpedicel unicolor: completely yellow, black or dark brown 24
24. Postpedicel yellow, approximately 1.5–2 times as long as wide 25
— Postpedicel black, approximately 3–3.5 times as long as wide (Fig. 7). Male sternite 5, epandrium and surstyli as in Figs 30–32 .... *C. albilabris* (Fabricius)
25. Thorax black completely. Male sternite 5, epandrium and surstyli as in Figs 98–100 .... *C. richterae* Ozerov et Krivosheina
— Thorax with pleural sclerites mostly or completely pale yellow 26

26. Wing with a distinct brown spot or shadow apically (*e.g.*, Fig. 20) 27
— Wing tinged with brownish, but without a distinct brown spot or shadow apically. Male sternite 5, epandrium and surstyli as in Figs 33–35 .... *C. albipes* (Fallén)
27. Male sternite 5, epandrium and surstyli as in Figs 75–77 .... *C. nubecula* (Sasakawa)
— Male sternite 5, epandrium and surstyli as in Figs 116–118 .... *C. sidorenkoi* Ozerov et Krivosheina
— Male sternite 5, epandrium and surstyli as in Figs 110–112 .... *C. shatalkini* Ozerov
— Epandrium and surstyli as in Figs 96, 97 .... *C. remota* Ozerov
28. Scutum with 1 postpronotal seta 29
— Scutum with 2 postpronotal setae. Male sternite 5, epandrium and surstyli as in Figs 131–133 .... *C. zaitzevi* Gorodkov
29. Femora subshining. Male sternite 5, epandrium and surstyli as in Figs 93–95 .... *C. remmi* Elberg
— Femora grey dusted. Male sternite 5, epandrium and surstyli as in Figs 72–74 .... *C. negrobovi* Ozerov et Krivosheina
30. Postpedicel yellow completely or blackish in apical half on the outside only 31
— Postpedicel blackish completely 34
31. Vein R_{2+3} with a brown spot apically, intersection of vein M and crossvein dm-cu with a brown spot, apex of wing darkened (Fig. 18). Hind tibia with apical ventral seta ... . *C. nartshukae* Ozerov et Krivosheina
— Wing clear, without dark spots. Hind tibia without apical ventral seta 32
32. Postpedicel yellow basally and blackish in apical half on the outside. Frontal vitta yellow apically and blackish basally. Scutum black in male and yellow with blackish stripes distally from each dorsocentral line in female. Male sternite 5, epandrium and surstyli as in Figs 66–68 .... *C. krocha* Ozerov
— Postpedicel and frontal vitta yellow completely 33
33. Scutum reddish yellow, with blackish stripes distally from each dorsocentral line. 2 postsutural intra-alar setae present. Male sternite 5, epandrium and surstyli as in Figs 119–121 .... *C. sifneri* Ozerov
— Scutum reddish yellow, unicolor. Postsutural intra-alar setae absent .... *C. amurensis* Ozerov (female)
34. 1 postpronotal seta present. Scutum unicolor: reddish yellow or blackish 35
— 2 postpronotal setae present. Scutum reddish yellow, with blackish stripes distally from each dorsocentral line. Male sternite 5, epandrium and surstyli as in Figs 125–127 .... *C. tartariana* Ozerov
35. Scutum reddish yellow. Male sternite 5, epandrium and surstyli as in Figs 36–38 ..... *C. amurensis* Ozerov (male)
— Scutum blackish. Male sternite 5, epandrium and surstyli as in Figs 78–80 .... *Cordilura nubilosa*, **sp.n.**

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